

Curriculum Vitae

PERSONAL

Prof. Dr. Muhammad Aamer Maqsood

S/o Dr. Maqsood Ahmad Gill

Institute of Soil and Environmental Sciences,
University of Agriculture, Faisalabad

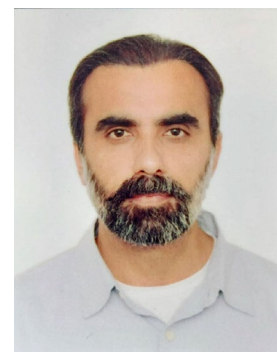
Date of Birth: March 4, 1981

Nationality: Pakistani

Office Tel: +92-41-9201077

Personal Tel: +92-333-6506589

Email address: mohamgill@uaf.edu.pk; mohamgill@hotmail.com
<https://orcid.org/0000-0002-0697-8881>



EDUCATION

- Ph.D. in Soil Fertility and Plant Nutrition, Institute of Soil and Environmental Sciences, Univ. of Agriculture, Faisalabad (2009).
Title of Thesis: Efficiency of zinc utilization in wheat genotypes
- M.Sc. (Hons.) Soil Science, Institute of Soil and Environmental Sciences, Univ. of Agriculture, Faisalabad (2006).
Title of Thesis: Heavy metal speciation in contaminated soils and their bioavailability
- B.Sc. (Hons.) Agriculture, UAF (2004)

EXPERIENCE

- Professor, Institute of Soil & Environmental Sciences, University of Agriculture, Faisalabad from 11 October 2024 to date.
- Associate Professor, Institute of Soil & Environmental Sciences, University of Agriculture, Faisalabad from 31 September 2019 to 10 October 2024.
- Assistant Professor, Institute of Soil & Environmental Sciences, University of Agriculture, Faisalabad from September 2009 to August 2019.
- Lecturer, Institute of Soil & Environmental Sciences, University of Agriculture, Faisalabad from December 31, 2005 to September 2009.

RESEARCH INTERESTS

- Monitoring and mitigation of GHG emissions from crops
- Enhancing bioavailable micronutrient content of major food crops
- Mineral nutrition of agronomic and horticultural crops
- Genotypic variation in crop species for nutrient uptake and utilization
- Assessment of the impact of heavy metal toxicity of soils on crop quality

FELLOWSHIPS

1. Post Doctorate Fellowship funded by Agriculture Development Fund (ADF), Canada, availed at University of Saskatchewan, Saskatoon, Sk, Canada from February 2012-2013.
2. Post Doctorate Fellowship funded by National Scientific and Engineering Research Council (NSERC), Canada, availed at University of Saskatchewan, Saskatoon, Sk, Canada from February 2013- December 2013.

PROJECTS/RESEARCH FUNDING AS PI OR COMPONENT LEAD

S. No	Title	Funding Agency	Amount	Duration
1.	Fertilize Right Pakistan	USDA-ICARDA	60,713 USD	2024-2027
2.	South Asian Nitrogen Hub; WP 2.1b “Genetic solutions to improve nitrogen use efficiency”- <i>WP lead for Pakistan</i>	UKRI, GCRF	348,462 GBP *(£25,000 for WP.2.1b)	2019-2024
3.	Improvement in citrus quality and production by standardization of nutrient assessment protocols for optimization of nutrient application	ALP-PARC	Rs. 4.902 million	2018-22
4.	Enhancing bioavailable Zn content in Lentil: A means to higher profits and improved Zn nutrition for rural Punjab	Higher Education Commission	Rs. 3.154 million	2015-18
5.	Assessing and quantifying nutrient flows and budgets in major agro-ecological systems in the Indus Basin, Pakistan	ICARDA	17,000 USD	2014-15
6.	Evaluating efficiency of Bio-Organic Phosphate in comparison to DAP for supplying phosphorus to maize and cotton on a calcareous soil	Grow Green, Australia	Rs. 0.6 million	2015-16
7.	Zinc biofortification in grains of wheat grown on zinc deficient soils of Punjab through farmer friendly approaches	Higher Education Commission	Rs. 2.38 million	2011-14

STUDENT SUPERVISION

Post Graduate Students

30 M.Sc (Hons.) *Completed*

05 M.Sc (Hons.) *In Progress*

Ph.D Scholars

06 *Completed*

04 *In progress*

PUBLICATIONS

Research Papers:

1. Rasheed, N., M.A. Maqsood, T. Aziz, M.I. Ashraf, I. Saleem, S. Ehsan, A. Nawaz, H.M. Bilal and M. Xu. 2024. Zinc portioning and allocation patterns among various tissues confers variations in Zn use efficiency and bioavailability in lentil genotypes. *Frontiers Plant Sci.* 14; 1325370, doi.org/10.3389/fpls.2023.1325370
2. Farooq, A., B. Saeed, H.M. Bilal, M.A. Maqsood, M. Nasim, T. Aziz and X. Mingang. 2023. Solubilization and uptake of phosphorus (P) by wheat and maize crops from indigenous rock phosphate applied with biogas slurry and bagasse ash. *Water, Air, Soil Pollution* 234:709.
3. Ahmad, N., F. Younas, H.R. Ahmad, M. Sarfraz, M. A. Ayub, M.A. Maqsood, F. Rasul, M. F. Sardar, T. Mehmood and J. S. Ajarem, et al. 2023. Soybean (Glycine max) Cropland Suitability Analysis in Subtropical Desert Climate through GIS-Based Multicriteria Analysis and Sentinel-2 Multispectral Imaging. *Land*. 12: 2034. <https://doi.org/10.3390/land12112034>
4. Shaiza Amin, Tariq Aziz, Muhammad Zia-ur-Rehman, Ifra Saleem, Muhammad Rizwan, Ambreen Ashar, Hafiz Adnan Mussawar & **Muhammad Aamer Maqsood**. 2023. Zinc oxide nanoparticles coated urea enhances nitrogen efficiency and zinc bioavailability in wheat in alkaline calcareous soils. *Environ Sci Pollut Res*. <https://doi.org/10.1007/s11356-023-27209-5>
5. Muhammad Irfan, **Muhammad Aamer Maqsood**, Hafeez ur Rehman, Wajid Mahboob, Nadeem Sarwar, Osama Bin Abdul Hafeez, Saddam Hussain, Sezai Ercisli, Muhammad Akhtar and Tariq Aziz. 2023. Silicon Nutrition in Plants under Water-Deficit Conditions: Overview and Prospects. *Water*. 15: 739. <https://doi.org/10.3390/w15040739>
6. Ruba Munir, Khuram Ali, Syed Abbas Zilqurnain Naqvi, Amna Muneer, Muhammad Zeeshan Bashir, **Muhammad Aamer Maqsood** and Saima Noreen. 2023. Green metal oxides coated biochar nanocomposites preparation and its utilization in vertical flow constructed wetlands for reactive dye removal: Performance and kinetics studies. *Journal of Contaminant Hydrology*. 256, <https://doi.org/10.1016/j.jconhyd.2023.104167>
7. Hameed, M. K., W. Umar, A. Razzaq, T. Aziz, **M.A. Maqsood**, S. Wei, Q. Niu, D. Huang, and L. Chang. 2022. Differential Metabolic Responses of Lettuce Grown in Soil, Substrate and Hydroponic Cultivation Systems under $\text{NH}_4^+/\text{NO}_3^-$ Application. *Metabolites*. 12(5): 444. <https://doi.org/10.3390/metabo12050444>.
8. Razzaq, S., B. Zhou, M. Zia-ur-Rehman, **M.A. Maqsood**, S. Hussain, G. Bakhsh, Z. Zhang, Q. Yang, and A.R. Altaf. 2022. Cadmium Stabilization and Redox Transformation Mechanism in Maize Using Nanoscale Zerovalent-Iron-Enriched Biochar in Cadmium-Contaminated Soil. *Plants*. 11(8): 1074. <https://doi.org/10.3390/plants11081074>.
9. Ahmad I., H.R. Ahmad, Z. Farooqi, M. Sabir, M. Rizwan and **M.A. Maqsood**. 2022. Apportionment of heavy metals in a soil-water-plant system via brick kiln emissions in heavily industrialized city of Pakistan. *Environ. Sci. Pollut. Res. Int.* 2022 Mar 21. doi: 10.1007/s11356-022-19753-3.
10. Samreen, T., M. Imran, Z.A. Zahir, M.Z. Nazir. S. Noreen, S. Bashir, S. Kanwal, H. Munir and **M.A. Maqsood**. 2021. Development of Organically Complexed-Bioaugmented Boron-Coated DAP and Its Effect on Yield and Quality of Canola (Brassica napus L.). *J Plant Growth Regul.* <https://doi.org/10.1007/s00344-021-10453-9>

11. Nawaz, A., **M.A. Maqsood**, M.I. Awan and T. Aziz. 2021. Comparative efficacy of natural and synthetic nitrification inhibitors for nitrogen release in alkaline calcareous soils. *Pak. J. Agri. Sci.* 58:1473-1482.
12. Ehsan, S., T. Aziz, **M. Aamer Maqsood** and A. Jabbar. 2021. Potential impact of bioenergy wastes as fertilizer supplement on soil properties. *Pak. J. Agri. Sci.*, Vol. 58(3): 891-904.
13. Ifra Saleem, **Muhammad Aamer Maqsood**, Tariq Aziz, Ijaz Ahmad Bhatti and Abdul Jabbar. 2021. Potassium ferrite nano coated DAP fertilizer improves wheat (*Triticum aestivum* L.) growth and yield under alkaline calcareous soil conditions. *Pak. J. Agri. Sci.* 58(2): 485-492.
14. Ifra Saleem, **Muhammad Aamer Maqsood**, Muhammad Zia ur Rehman, Tariq Aziz, Ijaz Ahmad Bhatti and Shafaqat Ali. 2021. Potassium ferrite nanoparticles on DAP to formulate slow release fertilizer with auxiliary nutrients. *Ecotoxicology and Environmental Safety*. <https://doi.org/10.1016/j.ecoenv.2021.112148>.
15. Muhammad Irfan, Tariq Aziz, **Muhammad Aamer Maqsood**, Hafiz Muhammad Bilal, Kadambot H. M. Siddique and Minggang Xu. 2020. Phosphorus (P) use efficiency in rice is linked to tissue-specific biomass and P allocation patterns. *Scientific Repots.* 10, 4278. <https://doi.org/10.1038/s41598-020-61147-3>
16. Mohsin Ali, **Muhammad Aamer Maqsood**, Tariq Aziz, and Masood Iqbal Awan. 2020. Neem (*Azadirachta Indica*) oil coated urea improves nitrogen use efficiency and maize growth in an alkaline calcareous soil. *Pak. J. Agri. Sci.*, Vol. 57(3), 675-684.
17. Rasheed, N., **M.A. Maqsood**, T. Aziz, M.Z.U. Rehman, H.M. Bilal, M.A. Ayub, M. Irfan and M. Sanaullah, 2019. Zinc application methods affect its accumulation and allocation pattern in maize grown in solution culture. *Intl. J. Agric. Biol.*
18. Hamaad Raza Ahmad, Khalid Mehmood, Muhammad Fahad Sardar, **Muhammad Aamer Maqsood**, Muhammad Zia Ur Rehman, Changxiong Zhu & Hongna Li. 2019. Integrated risk assessment of potentially toxic elements and particle pollution in urban road dust of megacity of Pakistan, Human and Ecological Risk Assessment: An International Journal, DOI: 10.1080/10807039.2019.1611415
19. Irfan, M., T. Aziz, **M.A. Maqsood**, H.M. Bilal, W.U.D. Khan and N. Rasheed, 2019. Differential performance of lowland rice cultivars for phosphorus uptake and utilization efficiency under hydroponic and soil conditions. *Int. J. Agric. Biol.* DOI: 10.17957/IJAB/15.0947.
20. Bilal, H.M., T. Aziz, **M.A. Maqsood**, M. Farooq and G. Yan. 2018. Categorization of wheat genotypes for phosphorus efficiency. *PLOS ONE* 13(10):e0205471. <https://doi.org/10.1371/journal.pone.0205471>. (Impact Factor = 2.766)
21. Bilal, H. M., T. Aziz, **M. A. Maqsood** and M. Farooq. 2018. Grain phosphorus and phytate contents of wheat genotypes released during last 6 decades and categorization of selected genotypes for phosphorus use efficiency. *Archives of Agronomy and Soil Science*. DOI: 10.1080/03650340.2018.1521957. (Impact Factor = 2.254)
22. Khan, W., T. Aziz, **M.A. Maqsood**, M. Farooq, Y. Abdullah, P.M.A. Ramzani and H.M. Bilal. 2018. Silicon nutrition improved salt resistance in maize by modulating ionic accumulation, photosynthesis and antioxidants in plant organs. *Photosynthetica*. 56:1047–1057. (Impact Factor = 1.507)
23. **Maqsood, M.A.**, U.K. Awan, T. Aziz, H. Arshad, N. Ashraf and M. Ali. 2016. Nitrogen management in calcareous soils: problems and solutions. *Pak. J. Agri. Sci.*, Vol. 51(1): 79-95. (IF= 1.049)
24. Akhtar, T., M. Zia-ur-Rehman, A. Naeem, R. Nawaz, S. Ali, G. Murtaza, **M. A. Maqsood**, M. Azhar, H. Khalid and M. Rizwan. 2016. Photosynthesis and growth response of maize (*Zea mays* L.) hybrids exposed to cadmium stress. *Environ. Sci. Pollut. Res.* doi:10.1007/s11356-016-8246-0 (IF=2.760)
25. Qayyum, M. F., M. Z. Rehman, S. Ali, M. Rizwan, A. Naeem, **M. A Maqsood**, H. Khalid, Jörg Rinklebe and Yong Sik Ok. 2017. Residual effects of monoammonium

- phosphate, gypsum and elemental sulfur on cadmium phytoavailability and translocation from soil to wheat in an effluent irrigated field. *Chemosphere*. 174: 515-523 (IF= 3.698)
26. **Maqsood, M.A.**, M. K. Khan, M. A. Naeem, S. Hussain, T. Aziz, and J. Schoenau. 2015. High sodium in irrigation water caused b toxicity at low soil solution and shoot b concentration in maize (*Zea Mays L.*). *Journal of Plant Nutrition*, 38:728–741. (IF = 0.494)
 27. **Maqsood, M.A.**, S. Hussain, T. Aziz, M. Ahmad, M. A. Naeem, H. R. Ahmad, S. Kanwal and M. Hussain. 2015. Zinc indexing in wheat grains and associated soils of southern Punjab. *Pak. J. Agric. Sci.* 52(2):431-438. (IF = 1.049)
 28. Imran, M., S. Kanwal, S. Hussain, Tariq Aziz and **M.A. Maqsood**. 2015. Efficacy of zinc application methods for concentration and estimated bioavailability of zinc in grains of rice grown on a calcareous soil. *Pak. J. Agric. Sci.* 52(1): 169-175. (IF =1.049)
 29. S. Hussain, Z. Rengel, S. A. Mohammadi, A. Ebadi-Segherloo and **M. A. Maqsood**. 2015. Mapping QTL associated with remobilization of zinc from vegetative tissues into grains of barley (*Hordeum vulgare*). *Plant Soil*. DOI 10.1007/s11104-015-2684-1. (IF =2.952)
 30. Khan, W., M. Faheem, M. Y. Khan, S. Hussain, **M. A. Maqsood** and T. Aziz. 2015. Zinc requirement for optimum grain yield and zinc biofortification depends on phosphorus application to wheat cultivars. *Romanian Agricultural Research*. DII 2067-5720 RAR 2015-124. (IF =0.281)
 31. Ahmad, F., **M. A. Maqsood** ,T. Aziz and M. A. Cheema. 2014. Water soluble iron (Fe) concentration in alkaline and calcareous soils influenced by various Fe sources. *Pak. J. Agric. Sci.* 51:417-421. (IF=0.609)
 32. Iqbal, J., S. Kanwal, S. Hussain, Tariq Aziz and **M.A. Maqsood**. 2014. Zinc Application Improves Maize Performance through Ionic Homeostasis and Ameliorating Devastating Effects of Brackish Water. *Int. J. Agric. Biol.* 16: 383–388. (IF=0.746)
 33. Naeem, M.A., **M.A. Maqsood**, S. Hussain, M.K. Khan and S. Kanwal. 2013. Irrigation with brackish water modifies boron requirement of mungbean (*Vigna radiata L.*) on Typic Calciargid. *Archives of Agronomy and Soil Science* 59(1): 133–145. (IF= 2.137)
 34. Hussain, S., **M.A. Maqsood**, Z. Rengel, T. Aziz and M. Abid. 2013. Estimated zinc bioavailability in milling fractions of biofortified wheat grains and in flours of different extraction rates. *International Journal of Agriculture and Biology* 15(5): 921–926. (IF= 0.93)
 35. Hussain, S., **M.A. Maqsood**, T. Aziz and S.M.A. Basra. 2013. Zinc bioavailability response curvature in wheat grains under incremental zinc applications. *Archives of Agronomy and Soil Science* 59(7): 1001–1016. (IF= 2.137)
 36. Akhtar, M.S., M. Nishigaki, Y. Oki, T. Adachi, Y. Nakashima, G. Murtaza, Tariq Aziz and **M. A. Maqsood**. 2013. Solublization and acquisition of phosphorus from sparingly soluble phosphorus sources and differential growth response of Brassica cultivars exposed to phosphorus stress. *Communications of Soil Sci & Plant Analysis* 44:7, 1242-1258. (IF= 1.06)
 37. Hussain, S., **M. A. Maqsood**, Z. Rengel and T. Aziz. 2012. Biofortification and estimated human bioavailability of zinc in wheat grains as influenced by methods of zinc application. *Plant and Soil*. DOI 10.1007/s11104-012-1217-4. (IF= 3.052)
 38. Hussain, S., **M.A. Maqsood**, Z. Rengel and M.K. Khan. 2012. Diminishing trend of mineral bioavailability in grains of bread wheat varieties of Pakistan. *Euphytica*. 186:153–163. (IF= 1.626)
 39. Ashraf, M., M. Afzal, R. Ahmad, **M. A. Maqsood**, S. M. Shahzad, M. A. Tahir, N. Akhtar and A. Aziz. 2012. Growth response of the salt-sensitive and the salt-tolerant sugarcane genotypes to potassium nutrition under salt stress. *Archives of Agronomy and Soil Science*. 58 (4): 385–398. (IF= 2.137)

40. Hussain, S., **M. A. Maqsood**, and L. V. Miller. 2012. Bioavailable Zinc in Grains of Bread Wheat Varieties of Pakistan. *Cereal Research Communications*. 40(1): 62-73. (IF= 0.496)
41. Naeem, M. A., **M. A. Maqsood**, S. Hussain, M.K. Khan and S. Kanwal. 2011. Irrigation with Brackish Water Modifies Boron Requirement of Mungbean (*Vigna radiata* L.) on a Typic Calciargid. *Archives of Agronomy and Soil Sci.* DOI:10.1080/03650340.2011.604771. (IF= 2.137)
42. Aziz, T., M. Farooq, **M. A. Maqsood** and M. Sabir. 2011. Variation in phosphorus efficiency among brassica cultivars I: internal utilization and phosphorus remobilization. *J. Plant Nutr.* 34(13):2006–2017. (IF= 0.618)
43. **Maqsood, M. A.**, S. Hussain, T. Aziz, M. Ashraf and S. Kanwal. 2011. Wheat Exuded Organic Acids Influence Zinc Release from Calcareous Soils. *Pedosphere*. 21(5): 657-665. (IF= 1.734)
44. Hussain, S., and **M.A. Maqsood**. 2011. Rootzone temperature influences nutrient accumulation and use in maize. *Pakistan Journal of Botany* 43 (3): 1551-1556. (IF= 0.690)
45. Hussain, S., **M. A. Maqsood** and Rahmatullah. 2011. Zinc release characteristic from calcareous soils using DTPA and other organic acids. *Comm. Soil Sci. and Plant Anal.* 42(15): 1870-1881. (IF= 1.06)
46. Sattar, S., **M.A. Maqsood** Rahmatullah and S. Hussain, 2011. Internal and External Phosphorus Requirements of Maize (*Zea mays* L.) Genotypes on Typic Calciargid. *Comm. Soil Sci. Plant Anal.* 42(2): 184-193. (IF= 1.06)
47. Aziz, T., Rahmatullah, **M. Aamer Maqsood**, M. Sabir, and S. Kanwal. 2011. Categorization of brassica cultivars for phosphorus acquisition from phosphate rock on basis of growth and ionic parameters. *J. Plant Nutr.* 34(4): 522-533. (IF= 0.618)
48. Hussain, S., **M.A. Maqsood**, Rahmatullah and S. Kanwal. 2010. Root-zone temperature influences zinc requirement of maize cultivars on a calcareous soil. *J. Plant Nutr.* 33(13): 1960-1969. (IF= 0.618)
49. Imran, M., **M.A. Maqsood** Rahmatullah, and S. Kanwal. 2010. Increasing SAR of Irrigation Water Aggravates Boron Toxicity in Maize (*Zea mays* L.). *J. Plant Nutr.* 33(9): 1301-1306. (IF= 0.618)
50. Liaqat, A., Rahmatullah, T. Aziz, M. Ashraf, **M. A. Maqsood** and S. Kanwal. 2010. Differential potassium influx influences growth of two cotton varieties in hydroponics. *Pak. J. Bot.*, 42(2): 943-953. (IF= 0.690)
51. Ashraf, M., Rahmatullah, R. Ahmad, A. S. Bhatti, A. Sarwar, **M. A. Maqsood** and S. Kanwal. 2010. Amelioration of Salt Stress in Sugarcane (*Saccharum officinarum* L.) by Supplying Potassium and Silicon in Hydroponics. *Pedosphere* 20(2): 153-162. (IF= 1.734)
52. **Maqsood, M. A.**, Rahmatullah, Shamsa Kanwal, Tariq Aziz and Muhammad Ashraf. 2009. Evaluation of Zn distribution among grain and straw of twelve indigenous wheat (*triticum aestivum* l.) Genotypes. *Pak. J. Bot.* 41(1): 225-231. (IF= 0.690)
53. Liaqat Ali, Rahmatullah, **M. Aamer Maqsood**, Shamsa Kanwal, M. Ashraf and A. Hannan. 2009. Potassium substitution by sodium in root medium influencing growth behavior and potassium efficiency in cotton genotypes. *J. Plant Nut.* 32(10): 1657-1673. (IF= 0.618)
54. Ashraf, M. Rahmatullah, R. Ahmad, M. A. Tahir, S. Kanwal and **M.A. Maqsood**. 2009. Potassium and silicon improve yield and juice quality in sugarcane (*Saccharum officinarum* L.) under salt stress. *J. Agron. Crop Sci.* 195(4): 284-291. (IF= 2.727)
55. M. Ashraf, Rahmatullah, **M. A. Maqsood**, S. Kanwal, M. A. Tahir and L. Ali. 2009. Growth responses of wheat cultivars to rock phosphate in hydroponics. *Pedosphere*. 19(3): 398-402. (IF= 1.734)

56. Kanwal, S., Rahmatullah, **M. Aamer Maqsood** and H. F. S. Gul Bakhat. 2009. Zinc requirement of maize hybrids and indigenous varieties on Udic Haplustalf. *J. Plant Nutrition*. 32(3): 470-478. (IF= 0.618)
57. Kanwal, S., Rahmatullah, T. Aziz, **Muhammad Aamer Maqsood** and Najam Abbas. 2008. Critical ratio of calcium and boron in maize shoot for optimum growth. *J. Plant Nutrition*. 31(9): 1535-1542. (IF= 0.618)
58. Gill, M. A., Rahmatullah, M. Irfan and **Muhammad Aamer Maqsood**. 2007. Silicon requirement of coarse and fine varieties of rice. *J. Plant. Nutrition*. 30(2): 163-170. (IF= 0.618)

Book Edited:

1. Tariq Aziz, Abdul Wakeel, Muhammad Watto, Muhammad Ullah, **Muhammad A. Maqsood** and Aysha Kiran (Eds.). 2021. Nitrogen Assessment: Pakistan as a Case-Study. Academic Press. London UK. ISBN: 9780128244173.

Book Chapters:

1. **M. A. Maqsood**, Naqsh-e-Zuhra, Imran Ashraf, Nasir Rasheed and Z. A. Shah. 2021. Sources of nitrogen for crop growth: Pakistan's case. *In: T. Aziz (Eds.). Nitrogen Assessment: Pakistan as a Case-Study*. Academic Press. London UK. ISBN: 9780128244173
2. Akhtar, J., M. Yaseen, M. Rashid, G. Murtaza and **M. A. Maqsood**. 2018. Fertilizers and Gypsum. *In: Khan, I. A. and M. Sarwar (Eds.). Developing Sustainable Agriculture in Pakistan*. pp: 185-206. CRC Press. Taylor and Francis Group. Boca Raton, FL, USA.
3. Murtaza, G., M. Zia-ur-Rehman, **M. A. Maqsood** and A. Ghafoor. 2018. Treatment and Management of Low Quality Water for Irrigation. *In: Khan, I. A. and M. Sarwar (Eds.). Developing Sustainable Agriculture in Pakistan*. pp: 267-282. CRC Press. Taylor and Francis Group. Boca Raton, FL, USA.
4. **Maqsood, M.A.**, T. Aziz, M. Sabir, A. Wakeel, M. Sanaullah and M.Z. Rehman. 2017. Soil Organic Matter: Significance, Sources and Functions. *In: Sabir et al. (Eds). Soil Science, concepts and applications*. University of Agriculture, Faisalabad. Pakistan.
5. Wakeel, A., M. Yaseen, **M. A. Maqsood**, M. Sanaullah and T. Aziz. 2017. Plant Nutrients and Soil Fertility Management. *In: Sabir et al. (Eds). Soil Science, concepts and applications*. University of Agriculture, Faisalabad. Pakistan.
6. Khan, W.D., T. Aziz, **M.A. Maqsood**, M. Sabir, H.R. Ahmad, P.M.A. Ramzani and M. Naseem. 2016. Silicon: A beneficial nutrient under salt stress, its uptake mechanism and mode of action. *In: Hakeem et al., (Ed.) Soil Science: Agricultural and Environmental Prospectives* pp 287-301. ISBN: 978-3-319-34449-2 Springer, Switzerland.
7. Aziz, T., **M. Aamer Maqsood**, S. Kanwal, S. Hussain, H.R. Ahmad, and M. Sabir. 2015. Fertilizers and Environment: Issues and Challenges. *In: Crop Production and Global Environmental Issues*, Hakim, K.R. (Ed.) pp. Springer. DOI 10.1007/978-3-319-23162-4_21
8. Aziz, T., M. Sabir, M. Farooq, **M.A. Maqsood**, H.R. Ahmad. 2014. Phosphorus deficiency in plants; Responses, adaptive mechanisms and signaling. *In: Plant Signaling; Understanding the molecular cross-talks*, Hakim et al. (Ed.) Springer.
9. **Maqsood M.A.**, S. Hussain, T. Aziz and M. Ashraf. 2013. Sustainable Agriculture through Integrated Soil Fertility Management on Degraded Lands. pp. 759–768 *In: S.A. Shahid, M.A. Abdelfattah, and F.K. Taha (eds.) Developments in Soil Salinity Assessment and Reclamation: Innovative Thinking and Use of Marginal Soil and Water Resources in Irrigated Agriculture*. Springer, The Netherlands.

ABSTRACTS IN SCIENTIFIC PROCEEDINGS AND SEMINARS

1. Hamaad Raza Ahmad , Muhammad Sabir, **Muhammad Aamer Maqsood**, Muhammad Sarfraz and and Nouman Ahmad. 2023.Determinating contamination level of metals ion in roadside dust. International Conference on Soil Pollution and Remediation : Solution for Pollution. FC college, Lahore. March. 15-16, 2023. P. 61.
2. Nouman Ahmad, Hamaad Raza Ahmad, **Muhammad Aamer Maqsood**, Muhammad Tayyib, Muhammad Usman and Muhammad Ashar Ayub. 2023. Proposed Agro- Climatic classification for managing soybean cultivation using decision making techniques. International Conference on Soil Pollution and Remediation: Solution for Pollution. FC college, Lahore. March. 15-16, 2023. P. 88
3. Aziz, T., **M.A. Maqsood**, A. Wakeel and M.S. Ullah. 2022. Why Care About Nitrogen; Opportunities and Challenges. *In* 19th International Congress of Soil Science: Soil Health and Sustainable Development Goals. 9-11 March 2022, University of Agriculture Faisalabad, Pakistan
4. Nawaz, A., T. Aziz, **M.A. Maqsood**, M.I. Awan, A. Sattar, N. Rasheed, I. Saleem, A. Farooq, M.I. Ashraf, A. Shoukat, M.A. Haq, M. Arif, A. Aslam, N. Mukhatr and F. Rasheed. 2022. Impact of natural nitrification inhibitor coated urea to reduce nitrous oxide emissions and to enhance the productivity of rice and wheat crops. *In* 19th International Congress of Soil Science: Soil Health and Sustainable Development Goals. 9-11 March 2022, University of Agriculture Faisalabad, Pakistan
5. Rasheed, N. **M.A. Maqsood**, M.I. Ashraf, I. Saleem, S. Ehsan and A. Nawaz. 2022. Evaluation of responsive lentil genotypes for zinc nutrition under different field conditions. *In* 19th International Congress of Soil Science: Soil Health and Sustainable Development Goals. 9-11 March 2022, University of Agriculture Faisalabad, Pakistan.
6. Saleem, I., **M.A. Maqsood**, T. Aziz, N. Rashid, M.I. Ashraf, S. Ehsan, A. Nawaz, and A. Shakoor. 2022. Response of potassium ferrite nano-coated DAP on growth, gas exchange parameters, ionic content of wheat crop. *In* 19th International Congress of Soil Science: Soil Health and Sustainable Development Goals. 9-11 March 2022, University of Agriculture Faisalabad, Pakistan.
7. Manzoor, N., **M. A. Maqsood**, T. Aziz, M. Shahid, M. Noman and T. Ahmed. 2018. Application of Hydrogel for Control Release of Zinc and Water Use Efficiency in Brassica. p. 78. *In*: A. Khalid, S. Mehmood, S. Qadeer, M. Iqbal, G. M. Jamro and D. Muhammad (eds.) 17th International Congress of Soil Science. 13-15 March 2018, Faisalabad, Pakistan.
8. Rasheed, N., **M. A. Maqsood**, T. Aziz, H. M. Bilal, I. Saleem, S. Ehsan and M. Ali. 2018. Zinc Accumulation and Allocation Pattern in Maize as Influenced By Various Sources of Solution and Foliar Applied Zinc in Solution Culture. p. 223. *In*: A. Khalid, S. Mehmood, S. Qadeer, M. Iqbal, G. M. Jamro and D. Muhammad (eds.) 17th International Congress of Soil Science. 13-15 March 2018, Faisalabad, Pakistan.

9. Ehsan, S., T. Aziz, I. Saleem, **M. A. Maqsood** and N. Rasheed. 2018. Anaerobic Digestate and Bagasse Ash Potential for Improving Crop Growth, Yield and Soil Health. p. 296. *In*: A. Khalid, S. Mehmood, S. Qadeer, M. Iqbal, G. M. Jamro and D. Muhammad (eds.) 17th International Congress of Soil Science. 13-15 March 2018, Faisalabad, Pakistan.
10. Sattar, A., **M. A. Maqsood**, T. Aziz, M. Khalid, Z. Aslam, H. M. Bilal. 2018. Wheat Germination and Growth in Cadmium Contaminated Soil Amended with Biochar. . p. 320. *In*: A. Khalid, S. Mehmood, S. Qadeer, M. Iqbal, G. M. Jamro and D. Muhammad (eds.) 17th International Congress of Soil Science. 13-15 March 2018, Faisalabad, Pakistan
11. Aziz, T., H. M. Bilal, **M. A. Maqsood**, M. Sabir and H. R. Ahmad. 2017. Categorizing wheat genotypes for phosphorus efficiency; parameters vs methods. XVIII International Plant Nutrition Colloquium 19-24 August 2017 • Copenhagen | Denmark
12. Mehmood, A., **M.A. Maqsood**, T. Aziz, H.M. Bilal, M. Ali, N. Rasheed and W. Umar. 2017. Screening of phosphorous efficient rice (*Oryza sativa* L.) genotypes under phosphorous deficit condition in solution culture. p. 39. *In*: S. Bashir, Z.A. Saqib and Z. Aslam (eds.) Int. Conf. Advances in Agricultural Resource Management (ICARM-2017). 5-7 April 2017, Faisalabad, Pakistan.
13. Hameed, K.M., T. Aziz, **M.A. Maqsood**, M. Ali, N. Rasheed, A. Mehmood, W. Umar and M. Shehzad. 2017. Effect of zinc oxide nanoparticles and other zinc fertilizers on the growth of maize (*Zea mays*). p. 97. *In*: S. Bashir, Z.A. Saqib and Z. Aslam (eds.) Int. Conf. Advances in Agricultural Resource Management (ICARM-2017). 5-7 April 2017, Faisalabad, Pakistan.
14. Shehzad, M., T. Aziz, **M.A. Maqsood**, M.A. Qureshi, M. Ali, N. Rasheed, A. Mehmud, W. Umar and M.K. Hameed. 2017. Effect of bioenergy waste application on growth of raya (*Brassica napus* L.). p. 145. *In*: S. Bashir, Z.A. Saqib and Z. Aslam (eds.) Int. Conf. Advances in Agricultural Resource Management (ICARM-2017). 5-7 April 2017, Faisalabad, Pakistan.
15. Zia, S., **M.A. Maqsood**, T. Aziz, M. Shehzad, A. Haseeb, H.R. Ahmad and A. Rehman. 2017. Concentration of zinc in flood-affected area: a case study of Chiniot. p. 149. *In*: S. Bashir, Z.A. Saqib and Z. Aslam (eds.) Int. Conf. Advances in Agricultural Resource Management (ICARM-2017). 5-7 April 2017, Faisalabad, Pakistan.
16. Umar, W., **M.A. Maqsood**, T. Aziz, M. Ali, N. Rasheed, A. Mehmood, M.K. Hameed, M. Safeer, M. Shahzad and M.Y. Nadeem. 2017. Application of zinc oxide nanoparticles as fertilizer for improving maize (*Zea mays* L.) growth. p. 164. *In*: S. Bashir, Z.A. Saqib and Z. Aslam (eds.) Int. Conf. Advances in Agricultural Resource Management (ICARM-2017). 5-7 April 2017, Faisalabad, Pakistan.
17. Sattar, Z., T. Aziz, **M.A. Maqsood**, H.M. Bilal and S. Hussain. 2015. Combating Zn malnutrition through soil and foliar application of Zn in wheat. p 158:159. Proc. Int. Conf. Soil Sust. Food Security. November 15-17, 2015. University of Agriculture, Faisalabad.
18. Rasheed, N., **M.A. Maqsood**, T. Aziz, S. Hussain and H. Raza. 2015. Assessment of Zn partitioning in maize genotypes by varying methods of Zn application in hydroponics. p 162:163. Proc. Int. Conf. Soil Sust. Food Security. November 15-17, 2015. University of Agriculture, Faisalabad.

19. Ashraf, M.N., T. Aziz, **M.A. Maqsood**, H.M. Bilal, M. Zia, M. Sabir and H.R. Ahmad. 2015. Natural nitrification inhibitors: A promising technology to enhance nitrogen efficiency. p 196:197. Proc. Int. Conf. Soil Sust. Food Security. November 15-17, 2015. University of Agriculture, Faisalabad.
20. **Maqsood, M. A.**, J. Schoenau, S. Anderson, A. Vandenberg and T. Warkentin. 2014. The Influence of Zinc Fertilization on Bioavailable Zinc Content in Lentil. In: Soil and crops workshop, Prairieland Park, Saskatoon Sk. 11-12 March, 2014. University of Saskatchewan, Saskatoon, Sk Canada.
21. Tahir Abbas, Tariq Aziz, **Muhammad Aamer Maqsood**, Waqas-ud-Din Khan, Muhammad Nasim and Shamsa Kanwal. 2014. Growth response of maize to applied phosphatic fertilizer with and without organic soil conditioner. p. 21. In: 15th International congress of Soil Science on “Soil management in changing climate”. March 18-20, 2014, Islamabad, Pakistan.
22. Waqas-ud-Din Khan, **Muhammad Aamer Maqsood**, Tariq Aziz, Muhammad Aon. 2014. Zinc requirement for optimum grain yield and zinc biofortification depends on phosphorus application to wheat cultivars. p. 40. In: 15th International congress of Soil Science on “Soil management in changing climate”. March 18-20, 2014, Islamabad, Pakistan.
23. Shahwar Hussain, Tariq Aziz, Hafiz Muhammad Bilal, **Muhammad Aamer Maqsood**, Muhammad Sabir, Hamad Raza Ahmad, Ejaz Ahmad Waraich, Muhammad Asaad Bashir. 2014. Growth and potassium uptake of three wild plant species. p. 196. In: 15th International congress of Soil Science on “Soil management in changing climate”. March 18-20, 2014, Islamabad, Pakistan.
24. Waqas-ud-Din Khan, Tariq Aziz, **Muhammad Aamer Maqsood**, Muhammad Khalid, Ejaz Ahmad Waraich and Muhammad Sabir. 2014. Screening and categorization of maize cultivars for silicon acquisition under salinity stress. p 198. In: 15th International congress of Soil Science on “Soil management in changing climate”. March 18-20, 2014, Islamabad, Pakistan.
25. Hafiz Muhammad Bilal, Tariq Aziz, **Muhammad Aamer Maqsood**, Ehsanullah, Muhammad Sabir and Hamad Raza Ahmad. 2014. Growth and phosphorus uptake of three wild plant species. p. 199. In: 15th International congress of Soil Science on “Soil management in changing climate”. March 18-20, 2014, Islamabad, Pakistan.
26. Zaghum Sattar, Tariq Aziz, **Muhammad Aamer Maqsood**, Hafiz Muhammad Bilal, Shahid Hussain, Abdul Jabbar and Hamad Raza Ahmad. 2014. Comparative effect of soil and foliar applied Zn on grain yield and grain Zn concentration in two wheat genotypes different in Zn use efficiency. p. 200. In: 15th International congress of Soil Science on “Soil management in changing climate”. March 18-20, 2014, Islamabad, Pakistan.

WORKSHOPS/CONFERENCES ORGANIZED AND ATTENDED AS INVITED SPEAKER

1. GHG Emissions in Rice Systems: Basics of Mechanisms and Standards for Measurements – IRRI Education. November 25-29, 2024, at the IRRI, Los Banos, the Philippines
2. Convener, Media/Publication Committee in the International conference on “Climate Change: Impacts and Solutions”. 7-9 November 2022. University of Agriculture, Faisalabad.
3. Member, organizing committee of multiple workshops under the research project titled “GCRF-South Asian Nitrogen Hub” from February-September 2023.
4. Member, Publicity Committee in 19th International Congress of Soil Science. 15-17 February, 2022. University of Agriculture, Faisalabad.
5. Focal Person, One-day Seminar on “Alleviating Zinc Deficiency Through Biofortification of Wheat in Pakistan”. 22nd October 2021. CAS Auditorium, University of Agriculture, Faisalabad.
6. Member Organizing Committee, Farmers’ meeting cum workshop on sustainable nitrogen management. 29th December 2021. Chak No. 29 JB, Ameen Pur Road, Faisalabad.
7. Organizer in International Webinar entitled “A Way Forward to Food Quality and Safety”. June 23, 2021. University of Agriculture, Faisalabad.
8. Invited speaker (presented online) in the 2020 silk Road International Symposium on Plateau Ecological & Environmental Protection and High-Quality Development of Yellow River Basin. December 11-12, 2020. Xi’an University of Technology, China.
9. Stakeholders workshop on “Perspectives and Challenges of Nitrogen Fertilizer Use in Agriculture of Pakistan. June 25-26, 2019. University of Agriculture, Faisalabad.
10. Resource Person in 2nd International Workshop on “Scholarly Writing and Publishing”. December 9-13, 2019. University of Agriculture Faisalabad.
11. 17th International Congress of Soil Science, Soil: Ultimate Solution of Food Security and Climate Change. Soil Science Society of Pakistan. March 13-15, 2018, Faisalabad, Pakistan
12. Int. Conf. Advances in Agricultural Resource Management (ICARM-2017). April 5-7, 2017, Faisalabad, Pakistan
13. Seminar on micronutrient malnutrition and biofortification. October 30, 2017. University of Agriculture, Faisalabad
14. International seminar on Importance of Potassium and its development in Pakistan. April 18, 2017. University of Agriculture, Faisalabad
15. 16th International Congress of Soil Science: Healthy Soils for Food Security. Organized by Soil Science Society of Pakistan. March 15-17, 2016. PMAS Arid Agri. University, Rawalpindi.
16. 3rd International Conference on Global Environmental Changes. Organized by Dept. of Environ. Sciences and Engineering. March 21-22, 2016. Government College University, Faisalabad.

17. First stakeholders Interactive Workshop on “Prospects of New Crops in Pakistan”. Organized by Department of Agronomy, UAF. April 9, 2016. University of Agriculture, Faisalabad.
18. One-day Workshop on Strategic Use of Digital Technology in University Instruction. Organized by US-Pak CAS in Agric. and Food Security. 17 October, 2016. University of Agriculture, Faisalabad.
19. Gender Mainstreaming in Agriculture. Organized by International Center for Agricultural Research in the Dry Areas (ICARDA). February 10-13, 2015. NARC, Islamabad.
20. International Workshop on Biofortification of Staple Crops: A Solution to Combat Malnutrition. March 29-31, 2015. University of Agriculture, Faisalabad.
21. Commodity Based Workshop on Balanced Use of Fertilizers and Food Security. Organized by FAO of the United Nations. October 06, 2015. Sahiwal.
22. One day training Workshop on Nutrient Flow Modeling using SWAT Model. Organized by NUST and ICARDA. December 21, 2015. NUST, Islamabad.
23. Consultative group meeting on soil salinity issues in Pakistan. Organized by ICARDA and ACIAR. January 05, 2016. University of Agriculture, Faisalabad.
24. 15th International congress of Soil Science on “Soil management in changing climate”. 18-20 March, 2014. Islamabad.
25. Soil and crops workshop, Prairieland Park, Saskatoon Sk. 05-07 March, 2013. University of Saskatchewan, Saskatoon, SK Canada.
26. 2nd Pakistan Zinc Day, 12th March 2013 at NIAB, Faisalabad