
CURRICULUM VITAE

Dr. TAYYABA NAZ

PERSONAL INFORMATION

Name	Dr. Tayyaba Naz
Address	Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad, Pakistan.
Mobile	+92 332 7772235
E-mail	tayyaba.uaf@gmail.com tayyabanaz@uaf.edu.pk
Nationality	Pakistani

OCCUPATIONAL FIELD AND EXPERIENCE

- Assistant Professor October 12, 2024-todate Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad, Pakistan
- Lecturer October 13, 2009- October 11, 2024 Saline Agriculture Research Centre, Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad, Pakistan

EDUCATION

Title of qualification awarded Awarding Institute	Ph.D. Soil Science (2015) University of Agriculture, Faisalabad, Pakistan.
Title of qualification awarded Awarding Institute	M.Sc. (Hons.) Agriculture (Soil Science) 2006-2008- 4.00/4.00 CGPA- Silver Medal University of Agriculture, Faisalabad, Pakistan.
Title of qualification awarded Awarding Institute	B.Sc. (Hons.) Agriculture (Soil Science) 2002-2006- 3.99/4.00 CGPA- Gold Medal University of Agriculture, Faisalabad, Pakistan.
Title of qualification awarded Awarding Institute	F.Sc. (Pre-medical) 819/1100 marks (74.45%) Board of Intermediate and Secondary Education, Faisalabad, Pakistan
Title of qualification awarded Awarding Institute	Secondary School Certificate 691/850 marks (81.29%) Board of Intermediate and Secondary Education, Faisalabad, Pakistan.

AWARDS & ACHEIVEMENTS

- **Gold Medal** for B.Sc. (Hons.) Agriculture for session 2002-2006 at the University of Agriculture Faisalabad.
- **Silver Medal** for M.Sc. (Hons.) Agriculture (Soil Science) for session 2006-2008 at the University of Agriculture Faisalabad.
- **Merit scholarship** in B.Sc. (Hons.) Agri. and M.Sc. (Hons.) Agri. at University of Agriculture, Faisalabad.
- HEC Approved Ph.D. Supervisor

INTERNATIONAL AWARD

- **Endeavour Research Fellowship awarded by Australian Government** in the year 2014 for Murdoch University, Australia. Visited School of Veterinary and life Sciences, Murdoch University, Australia for six months from September 20, 2014 to March 18, 2015 to avail Australian Endeavour Research Fellowship .

COMPETITIVE GRANTS

1. Higher Education Commission Funded Project (under NRPU) Entitled "Iron and Zinc biofortification in wheat under salt affected conditions" having total cost of Rs. 1.1 million and project duration of 36 months, Grant No: 6394/Punjab/NRPU/R&D/HEC/2016. (Principal Investigator)
2. Higher Education Commission Funded Project (under NRPU) Entitled "Analysis of the role of acid invertase in grain yield of maize under high temperature and water stress" having total cost of Rs. 8882330/- and project duration of 36 months, Grant Number 20-12029/NRPU/R&D/HEC/2020. (Co- Principal Investigator)

RESEARCH PUBLICATIONS

I. Impact Factor International Journal Publications

1. T Naz, NU Ain, M.M. Iqbal, M.A Mubeen, A Ditta, R Iqbal, MS Alwahibi, MS Elshikh. 2024. Exploring the potential of silicon and salicylic acid in the alleviation of water deficit stress in quinoa (*Chenopodium quinoa*). Polish Journal of Environmental Studies, Article ID PJOES-01959-2023-02.
2. S. Huang, P. Huang, S. Masood, M.M. Iqbal, T. Naz, S. Danish, M.A. Ansari, and S.H. Salmen. 2024. Enhancing Maize Growth Through the Synergistic Impact of Potassium Enrich Biochar and Spermidine. BMC Plant Biology. 24:36, Doi: 10.1186/s12870-024-04722-4.
3. S. Danish, M. Hareem, K. Dawar T. Naz, M.M. Iqbal, M.J. Ansari, S.H. Salmen, and R. Datta. 2024. The role of strigolactone in alleviating salinity stress in chili pepper. BMC Plant Biology. 23;24:209. doi: 10.1186/s12870-024-04900-4.
4. T. Naz, S. Fahad, J. Akhtar, M. Saqib. S. Alamri, M.H. Siddiqui, ·S. Saud, · J.Z.K. Khattak, S. Ali, ·S. Hassan,T. Nawaz, H.M. Hammad, · J. Banout, ·C. Wu, · D. Wang, R. Datta,· S. Danish and· W. Nasim. 2023. Bio-fortifcation of Two Wheat Cultivars with Iron and Zinc Through Their Soil and Foliar Application in Salt-Factored Soil:

Growth, Ionic, Physiological and Biochemical Modifications. Journal of Plant Growth Regulation, 1-19. <https://doi.org/10.1007/s00344-023-10955-8>.

5. T. Naz, M.M. Iqbal, Javaid Akhtar & Muhammad Saqib. 2023. Baseline hydroponic study for biofortification of bread wheat genotypes with iron and zinc under salinity: growth, ionic, physiological and biochemical adjustments, Journal of Plant Nutrition. DOI: 10.1080/01904167.2022.2067771.
6. Z. Mazhar, J. Akhtar, A. Alhodaib, T. Naz, M.I. Zafar, M.M. Iqbal, H. Fatima and I. Naz. 2023. Efficacy of ZnO nanoparticles in Zn fortification and partitioning of wheat and rice grains under salt stress. Scientific Reports, 13:2022 1-11 <https://doi.org/10.1038/s41598-022-26039-8>.
7. I. Ghafoor, T. Naz, M.M. Iqbal, M.A. haq, M. Saqib, M.A. Qazi, M.A. Sarwar, S.A. Alharbi, S. Alfarraj, and M.L. Battaglia. 2023. Silicon regulates growth, yield, physiological responses and tissue concentration of lead in *Brassica campestris* L. Grown in lead contaminated soil. Pakistan Journal of Botany, 55(SI): DOI: [http://dx.doi.org/10.30848/PJB2023-SI\(15\)](http://dx.doi.org/10.30848/PJB2023-SI(15)).
8. T. Naz; Iqbal, M.M.; Akhtar, J.; Saqib, M.; Ali, M.; Zafar, M.I.; Dell, B.; Datta, R.; Ansari, M.J.; Danish, S.; et al. 2022. Carbohydrate Partitioning, Growth and Ionic Compartmentalisation of Wheat Grown under Boron Toxic and Salt Degraded Land. Agronomy, 12, 740.
9. G. Murtaza, M.A.A. Maan, A. Alhodaib, M.M. Iqbal, T. Naz, M.I. Zafar, H. Fatima, R. Parveen and I. Naz. 2022. Biogeochemical Behavior of Lead and Nickel as Influenced by Phosphatic Fertilizer Applied to Rice (*Oryza sativa* L.) Cultivars Grown under City Effluent Irrigation. Water 4, 1319. 1-19 <https://doi.org/10.3390/w14091319>. EISSN: 2073-4441.
10. T. Naz; Iqbal, M.M.; Tahir, M.; Hassan, M.M.; Rehmani, M.I.A.; Zafar, M.I.; Ghafoor, U.; Qazi, M.A.; EL Sabagh, A.; Sakran, M.I. 2021. Foliar Application of Potassium Mitigates Salinity Stress Conditions in Spinach (*Spinacia oleracea* L.) through Reducing NaCl Toxicity and Enhancing the Activity of Antioxidant Enzymes. Horticulturae, 7, 566.
11. S.A. Javed, G. Sarwar, S. Afzal, A.R. Malik, M.M. Iqbal and T. Naz. 2020. Agronomic Biofortification of bread wheat (*Triticum aestivum* L.) as influenced by applied zinc and Iron rates in a field. International Journal of Botany Studies. 5:46-49
12. Iqbal, M.M., T. Naz, M.I. Zafar, M. Imtiaz, O. Farooq, A. Rehman, S. Ali, M. Rizwan, S. Hussain, W. Javed, G. Murtaza, M. Afzal, A. Mehmood, S.M. Mehdi, M. A. Sarwar, G.D. Laing. 2020. Green remediation of saline-sodic Pb-factored soil by growing salttolerant rice cultivar along with soil applied inorganic amendments. Paddy and Water Environment. 18:637:649
13. A. Rashid, T. Naz, M.M. Iqbal, J. Akhtar, M. Saqib, M.A. Haq, R. Ullah, S. Kabir and Q.D. Ikram. 2020. Influence of Organic Amendments on Growth and Lead Uptake of Spinach (*Spinacia oleracea* L.) Grown in Lead-Contaminated Soil. Environmental and Earth Sciences Research Journal. 7:53-61
14. M. A. Qayyum, J. Akhtar, F. Bashir, T. Naz, M.M. Iqbal, O. Farooq, A. Rehman, M.I. Zafar, M. Ali, M. Imtiaz, M. A. Sarwar, Z. A. Saqib, S.M.A. Basra, Z. Guoping and Yinglan. 2020. Physiological and Biochemical Characterization of Linseed Genotypes under Salinity Stress. International Journal of Agriculture and Biology. 23:630-636.
15. M.I. Zafar, S. Kali, M. Ali, M. A. Riaz, T. Naz, M.M. Iqbal, N. Masood, K. Munawar, B. Jan, S. Ahmed, A. Waseem and M.B.K. Niazi. 2020. Dechlorane Plus as an emerging

environmental pollutant in Asia: a review. *Environmental Science and Pollution Research*. 27: 42369–42389.

16. M. Ali, M. Majid, I Hussain, S Kali, T. Naz, M.B.K. Niazi, M.R.A. Khan, M.I. Zafar. 2020. Chlorpyrifos mediated oxidative damage and histopathological alterations in freshwater fish *Oncorhynchus mykiss* in Northern Pakistan. *Aquaculture Research* 51:4583-4594.
17. M.M. Iqbal,, I. Ahmad, S.M.A. Basra, A.B. Ijaz, Z.H. Tarar, M. Ansar, U. Iqbal, T. Naz, B. Fatima, M. Akram, A. Wasaya, A. Iqbal, S.A. Anwar, K.S.U. Khan, A. Khalid, A. Aziz and R. Mehmood. 2020. Induction of Heat Tolerance in Maize through Exogenous Application of Salicylic Acid, Ascorbic Acid and Hydrogen Peroxide in a Field Study. *Pakistan Journal of Agricultural Research*. 33:585-593.
18. T. Naz , J. Akhtar, M.M. Iqbal, G. Murtaza, M.A. Haq, N.K. Niazi, A. Rehman, O. Farooq, M. Ali and B. Dell. 2019. Assessment of gas exchange attributes, chlorophyll contents, ionic composition and antioxidant enzymes of sensitive and tolerant bread wheat genotypes in boron toxic, saline and boron toxic-saline soils. *International Journal of Agriculture and Biology*, 21: 1271–1278.
19. M.A. Qayyum, J. Akhtar, F. Bashir, T. Naz, M.M. Iqbal, O. Farooq, A. Rehman, M.I. Zafar, M. Ali, M. Imtiaz, M.A.Sarwar, Z.A. Saqib, S.M.A. Basra, Z. Guoping and Yinglan. 2020. Physiological and biochemical characterization of linseed genotypes in response to NaCl stress. *International Journal of Agriculture and Biology*. 23:630-636
20. T. Naz, J. Akhtar, M.A. Haq, M. Saqib, M.M. Iqbal and M. Shahid. 2018. Interaction of salinity and boron in wheat affects physiological attributes, growth and activity of antioxidant enzymes. *Pakistan Journal of Agricultural Science*, 55(2):339-347.
21. M.M. Iqbal, G. Murtaza, Tayyaba Naz, A. Hussain, M. Button and G. Du Laing. 2018. Pb fractionation and redistribution as affected by applied inorganic amendments under different soil moisture regimes and incubation time in saline–sodic Pb-polluted paddy soil. *Paddy and Water Environment*. 16:875–885.
22. M.M. Iqbal, G. Murtaza, T. Naz, N.K. Niazi, M. Shakir, F.M. Wattoo, O. Farooq, M. Ali, H. Rehman, I. Afzal, S.M. Mehdi and A. Mahmood. 2017. Effects of lead salts on growth, chlorophyll contents and tissue concentration of rice genotypes. *International Journal of Agriculture and Biology*, 19(1):69-76.
23. M.M. Iqbal, G. Murtaza, S.M. Mehdi, T. Naz, A. Rehman, O. Farooq, M. Ali, M. Sabir, M. Ashraf, G. Sarwar and G. Du Laing. 2017. Evaluation of phosphorus and zinc interaction effects on wheat grown in saline-sodic soil. *Pakistan Journal of Agricultural Science*, 54(3):531-537.
24. M.M. Iqbal, G. Murtaza, T. Naz, J. Akhtar, M. Afzal, E. Meers and G.D. Laing. 2017. Amendments affect Pb mobility and modulated Chemo-Speciation under different moisture regimes in normal and salt-affected Pb-contaminated soils. *International Journal of Environmental Science and Technology*, 14(1): 113-122.
25. W. Javed, A.S. Wexler, G. Murtaza, M.M. Iqbal, Y. Zhao, and T. Naz. 2016. Chemical characterization and source apportionment of atmospheric particles across multiple sampling locations in Faisalabad, Pakistan. *Clean Soil Air Water*. 44 (7): 753-765.
26. M. Shakar, M. Yaseen, A. Niaz, R. Mahmood, M.M. Iqbal and T. Naz. 2016. Calcium carbide-induced changes in germination, morpho-phenological and yield traits in cucumber (*Cucumis sativus* L.). *International Journal of Agriculture and Biology*, 18(4): 703-709.

27. A. Niaz, R.A. Sail, M.M. Iqbal, T. Naz, A. Ghafoor and G. Murtaza. 2015. Growth, tissue concentration and bioaccumulation of cadmium by different mungbean cultivars in a hydroponic study. Pakistan Journal of Agricultural Science, 52(4): 931-936.
28. S. Masood., T. Naz, M.T. Javed. I. Ahmad, H. Ullah and M. Iqbal. 2014. Effect of short-term supply of farmyard manure on maize growth and soil parameters in pot culture. Arch. Agron. Soil Sci., 60(3):337-347.

2. **Publications in HEC Recognized Journals**

1. Asif, N., Nawaz, S., Saleem, F., Tabasum, S. and Naz, T. 2022. Effects of genotypes, explants and plant growth regulators on In vitro callogenesis of garlic (*Allium sativum* L). Journal of Agriculture and Food, 3:10-21.
2. Farooq, O., Ali, M., Sarwar, N., Rehman, A., Iqbal, M. M., Naz, T., Asghar, M., Ehsan, F. 2021. Foliar applied brassica water extract improves the seedling development of wheat and chickpea. Asian Journal of Agriculture and Biology. 1–7. doi: 10.35495/ajab.2020.04.219
3. M.M. Iqbal, T. Naz, H. Rehman, S. Nawaz, M.A. Qayyum, M.I. Zafar, O.Farooq, A.Rehman, M. Imtiaz, G. Murtaza, A.Mahmood, S.M. Mehdi, S. Javed, M.A. Sarwar and M.I. Javed . 2020. Impact of Farm Manure Application on Maize Growth and Tissue Pb Concentration Grown on Different Textured Saline-Sodic Pb-Toxic Soils. Asian Journal of Agriculture and Biology, 8:52-60
4. M.M. Iqbal, G. Murtaza, T. Naz, W. Javed, S. Hussain, M. Ilyas, M.A. Anjum, S.M. Shahzad, M. Ashraf and Z. Iqbal. 2017. Uptake, translocation of Pb and chlorophyll contents of *Oryza sativa* as influenced by soil applied amendments under normal and salt-affected Pb-spiked soil conditions. Asian Journal of Agriculture and Biology, 5(1):15-25.
5. M. Ahmad, A. Hussain, M.F.Z. Akhtar, M. Zafar-Ul-Hye, Z. Iqbal, T. Naz, M.M. Iqbal. 2017. Effectiveness of multi-strain biofertilizer in combination with organic sources for improving the productivity of chickpea in drought ecology. Asian Journal of Agriculture and Biology, 5(4):228-237.
6. M.M. Iqbal, G. Murtaza, T. Naz, A. Niaz, S.M. Mehdi and A. Rehman. 2017. Genotypic differences in rice cultivars for lead (Pb) tolerance in salt affected soil. Journal of Agricultural Research, 55(4): 627-637.
7. I. Mukhtar, M.A. Shahid, M.W. Khan, R.M. Balal, M.M. Iqbal, T. Naz, M. Zubair and H.H. Ali. 2016. Improving salinity tolerance in chili by exogenous application of calcium and sulphur. Soil Environ. 35 (1) 56-64.
8. M.M. Iqbal, T. Naz, A. Rehman, N. Sarwar, G. Murtaza, R. Ahmad, G. Sarwar, O. Farooq, M. Ali and M.W. Khan. 2016. Assessment of P-Zn interactive effects on growth, P and Zn uptake by wheat in salt-affected soil. Pakistan Journal of Life and Social Sciences, 14(3): 144-150.
9. T. Naz, Javaid Akhtar, Muhammad Anwar-ul-Haq and Muhammad Shahid. 2015. Genetic variability in wheat genotypes for salt tolerance, growth and physiological responses. Soil and Environment. 34(2): 187-199.

3. **Book Chapters**

1. T. Naz, J. Akhtar, M.M. Iqbal, M.A. Haq, M. Saqib. 2016. Boron toxicity in salt-affected soils and effects on plants. In: Soil Science: Agricultural and Environmental Perspectives. M. sabir, J. Akhtar and K.R. Hakeem (Eds.). Springer International Publishing Switzerland. p. 259-286. ISBN: 978-3-319-34451-5.

Web link: <http://www.springer.com/gp/book/9783319344492>

2. Bibi, J. Icenhower, N.K. Niazi, T. Naz, M. Shahid, S. Bashir. 2016. Clay minerals: structure, chemistry, and significance in contaminated environments and geological CO₂ sequestration. In: Environmental Materials and Waste - Resource Recovery and Pollution Prevention. M.N.V. Prasad and Kaimin Shih Eds. 1st Ed. Elsevier, Academic Press, UK, P.543-567. DOI: 10.1016/B978-0-12-803837-6.00021-4.
WEBLINK:<https://www.elsevier.com/books/environmental-materials-and-waste/prasad/978-0-12-803837-6>. ISBN: eBook ISBN: 9780128039069. Paperback ISBN: 9780128038376
3. O. Farooq, N. Sarwar, T. A. Yasir, M. M. Iqbal, T. Naz, M. Ali, S. Afzal and S. Ahmad. 2019. Advanced Production Technology of Sugar Crops. In: Agronomic Crops Production Technologies. M. Hasanuzzaman (Ed.). Springer Nature Singapore. ISBN 978-981-32-9150-8 ISBN 978-981-32-9151-5 (eBook) <https://doi.org/10.1007/978-981-32-9151-5>
4. M.M. Iqbal, T. Naz, S. Iqbal, M.I. Zafar, O. Farooq, A. Rehman and M.A.Qazi. 2022. Rice grain quality. In. Modern Techniques of Rice Crop Production. N. Sarwar, A. Rehamn, S. Ahmad and M. Hasanuzzaman Eds. Springer Nature Singapore. Page 739-756.https://link.springer.com/chapter/10.1007/978-981-16-4955-4_36.
https://doi.org/10.1007/978-981-16-4955-4_36.
5. Majeed M, Muhammad M, Nawaz S, Naz T, Iqbal MM, Zahid N, Hussain M, Nawaz AN, Abbas G, Gulshan AB, Mehboob M. 2023. Nanopriming for Crop Management for Sustainable Agriculture: An Overview. In: Nanopriming Approach to Sustainable Agriculture. 2023:110-41. IGI Global Publisher.
6. Majeed M, Muhammad M, Hussain T, Ali M, Naz T, Nawaz S, Iqbal MM, Abbas G. 2023. Nanopriming-Based Management of Biotic Stresses for Sustainable Agriculture. In: Nanopriming Approach to Sustainable Agriculture 2023:263-289. IGI Global Publisher.

MEMBERSHIP PROFESSIONAL SOCIETIES

- *Soil Science Society of Pakistan*