

Dr. Muhammad Sabir
Associate Professor
Institute of Soil and Environmental Sciences
University of Agriculture, Faisalabad-38040, Pakistan
Email: cmsuaf@gmail.com, muhammad.sabir@uaf.edu.pk
Cell: 92 333 6545518

Summary

Currently, I am working as Associate Professor in the Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan. I started my professional carrier as **Lecturer** in the Institute of Soil and Environmental Sciences, University of Agriculture on May 28, 2004. On securing Ph.D. degree in May, 2009, I have been promoted as **Assistant Professor** in the same institute on May 14, 2009. I served as a **Post-Doctoral Researcher** in the Institute of Tropical Agriculture, Universiti Putra Malaysia during January 19, 2012 to January 10, 2013. I am privileged to avail Endeavour Research Fellowship funded by Government of Australia during July 2013 to January 2014 at School of Plant Biology, University of Western Australia, Perth, Australia. In the year 2018, I have been awarded with **Endeavor Executive Award** that was completed at the University of Sydney, Sydney, Australia. I have been promoted to the post of Associate Professor on August 31, 2019.

1. Academic Qualifications

Ph.D. (Soil Science) : University of Agriculture, Faisalabad-38040, Pakistan

M.Sc. (Hons.) Agri. (Soil Science): University of Agriculture, Faisalabad-38040, Pakistan

B.Sc. (Hons.) Agri. (Soil Science): University of Agriculture, Faisalabad-38040, Pakistan

2. Research Interests

1. Reclamation and management of salt-affected soils.
2. Carbon sequestration in degraded soils
3. Productive use of poor-quality water resources for enhancing crop yields.
4. Nutrient management in salt-affected soils.
5. Remediation and management of metal-contaminated soils.

3. Publications

a. Research Articles

1. Ahmed, R., M.Z. Rehman, M. Sabir, M. Usman, M. Rizwan, Z. Ahmad, H.F. Alharby, H.S. Al-Zahrani, H. Alsamadany, A.Y. Aldhebiani, Y.M. Alzahrani and A. A. Bamagoos. 2023. Differential response of nano zinc sulphate with other conventional sources of Zn in mitigating salinity stress in rice grown on saline-sodic soil. *Chemosphere* 327: 138479
2. Farooqi, Z.R., **M. Sabir**, H.R. Ahmad and M. Shahbaz. 2023. Reclaimed salt-affected soils can effectively contribute to carbon sequestration and food grain production: Evidence from Pakistan. *Applied Sciences* 13:1436.
1. Dahlawi, S., M. Sadiq, **M. Sabir**, Z.R. Farooqi, Saifullah, A.A. Qadir and T.K. Faraj. 2023. Differential Response of Brassica Cultivars to Potentially Toxic Elements and Their Distribution in Different Plant Parts Irrigated with Metal-Contaminated Water. *Sustainability* 15: 1966
2. Shehzad, M.T., **M. Sabir**, Saifullah, A.B. Siddique, M.M. Rahman and R. Naidu. 2022. Impact of water regimes on minimizing the accumulation of Arsenic in rice (*Oryza sativa* L.). *Water Air Soil Pollut.* 233:383.
3. Saeed, M.A., G. Murtaza, S. Ali, H. Aziz, M.F. Albeshr, S. Mahboob, I. Manzoor, Z.R. Farooqi, **M. Sabir**, H.R. Ahmad, A.A. Qadir and M.S. Rehman. 2022. Assessment of drinking water quality and associated socio-economic impacts in arid mountainous regions. *Sustainability* 14: 12567
4. **Sabir, M.**, S. Usman, Saifullah, S. Bibi, H.R. Ahmad, S. Nazar and Z.R. Farooqi. 2022. Nitrogen forms modify the growth response and accumulation of potentially toxic elements by wheat genotypes in nickel contaminated soil. *Clean Soil Air Water* 50: 2100231
5. Nadeem, F., R. Mahmood, M. Sabir, W. Khan, M.S. Haider, R. Wang, Y. Zhong, M. Ishfaq and X. Li. 2022. Foxtail millet [*Setaria italica* (L.) Beauv.] over-accumulates ammonium under low nitrogen supply. *Plant Physiol. Biochem.* 185:35-44.
6. Ullah, Habib, S. Alam, W. Ahmad, S. Morrow, **M. Sabir** and Y. Hemar. 2022. Synergistic effect of Acacia Pruning-derived biochar and nitrogen application on the mineral profile of maize grains. *Sustainability* 14:2995. Doi.org/10.3390/su14052995.
7. Ahmad, I., H.R. Ahmad, Z.R. 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.* DOI: do.org/10.1007/s11356-022-19753-3
8. Farooqi, Z.R., G. Murtaza, S. Bibi, **M. Sabir**, G. Owens, Saifullah, I. Ahmad and N. Zeeshan. 2022. Immobilization of cadmium in soil-plant system through soil and foliar applied silicon. *Intl. J. Phytorem.* DOI: doi.org/10.1080/15226514.2021.2024133.

9. Shehzad, M.T., **M. Sabir**, M.Z. Rehman, M.A. Zia and R. Naidu. 2022. Arsenic concentration in soil, water and rice grains of rice-growing areas of Punjab, Pakistan: multivariate statistical analysis. *Environ. Mon. Assess.* 194:346
10. Mirza, S.S., M. Eida, F. Jabeen, M. Iqtedar,, A. Mahmood, M. Akmal and **M. Sabir**. 2021. Biosorption of chromium from tannery effluent using carbon-activated algae granules of *Chlorella vulgaris* and *Scenedesmus obliquus*. *Intl. J. Environ. Sci. Technol.* 18:3061-3070.
11. Ahsan, W.A., H.R. Ahmad, Z.R. Farooqi, **M. Sabir**, M. A. Ayub, M. Rizwan, P. Ilic. 2021. Surface water quality assessment of Skardu springs using Water Quality Index. *Environ. Sci. Pollut. Res. Int.* 28(16):20537-20548. doi: 10.1007/s11356-020-11818-5.
12. Fatima, S., **M. Sabir**, T. Aziz, H.R. Ahmad, M. Yaseen, M.Z. Rehman, and K.R. Hakeem. 2021. Comparison of Fine and Coarse Rice Varieties for Nickel Accumulation and Growth Response at Different Levels of Nickel. *Clean Soil Air Water.* 49: 1-10. doi.org/10.1002/clen.202000336. ISSN: 1863-0669
13. **Sabir, M.**, T. Sultan, M. Yaseen, R. Ahmad and Z.H. Tarar. 2021. Comparative Effect of Different Phosphatic Fertilizers on Growth of Rapeseed (*Brassica napus* L.) in Alkaline Calcareous Saline-Sodic Soils. *Commun. Soil Science and Plant Analysis.* 52:2588–2596 <https://doi.org/10.1080/00103624.2021.1953056>
14. **Sabir, M.**, Z. Naseem, W. Ahmad, M. Usman, F. Nadeem, Saifullah and H. R. Ahmad. 2021. Alleviation of adverse effects of nickel on growth and concentration of copper and manganese in wheat through foliar application of ascorbic acid. *Int J. Phyto. Remed.* <https://doi.org/10.1080/15226514.2021.1962801>. ISSN: 1549-7879
15. Farooqi, Z. U. R., **Sabir, M.**, Latif, J., Aslam, Z., Ahmad, H. R., Ahmad, I., & Ilić, P. (2020). Assessment of noise pollution and its effects on human health in industrial hub of Pakistan. *Environmental Science and Pollution Research*, 27(3), 2819-2828. (IF=3.056).
16. **Sabir, M.**, Zia-Ur-Rehman, M., Aziz, T., Raza Ahmad, H., Saifullah, & Waraich, E. A. (2020). Comparative residual effect of activated carbon and other organic amendments on immobilization and phytoavailability nickel and other metals to Egyptian Clover (*Trifolium alexandrinum*) in contaminated soil. *International Journal of Phytoremediation.* 22(7):687-693. (IF=2.528).
17. Rehman, M.Z., M. Zafar, A.A. Waris, M. Rizwan, S. Ali, **M. Sabir**, M. Usman, M.A. Ayub, Z. Ahmad. 2020. Residual effects of frequently available organic amendments on cadmium bioavailability and accumulation in wheat. *Chemosphere.* 244:125548. (IF=5.778).

18. Nadeem, F., M. Azhar, M. Anwar-ul-Haq, **M. Sabir**, T. Samreen, A. Tufail, H.U. M. Awan and W. Juan. 2020. Comparative Response of Two Rice (*Oryza sativa* L.) Cultivars to Applied Zinc and Manganese for Mitigation of Salt Stress. *Journal of Soil Science and Plant Nutrition*. <https://doi.org/10.1007/s42729-020-00275-1>. (IF=2.516).
19. Ye, L., M.C. Arbestain, Q. Shen, J. Lehmann, B. Singh and **M. Sabir**. 2019. Biochar effects on crop yields with and without fertilizer: A meta-analysis of field studies using separate controls. *Soil Use and Management*. 36:2-18. (IF=1.690).
20. Shehzad, M. T., Murtaza, G., Shafeeque, **M. Sabir**, M., Nawaz, H., & Khan, M. J. (2019). Assessment of trace elements in urban top-soils of Rawalpindi-Pakistan: a principal component analysis approach. *Environmental monitoring and assessment*, 191(2), 65. (IF=1.903).
21. Shamshad, S., Shahid, M., Dumat, C., Rafiq, M., Khalid, S., **Sabir, M.**, & Niazi, N. K. (2019). A multivariate analysis of health risk assessment, phytoremediation potential, and biochemical attributes of *Spinacia oleracea* exposed to cadmium in the presence of organic amendments under hydroponic conditions. *International journal of phytoremediation*, 21(5), 461-470. (IF=2.528).
22. Rehman, M.Z., M. Rizwan, H. Khalid, S. Ali, A. Naeem, B. Yousaf, G. Liu, **M. Sabir** and M. Farooq. 2018. Farmyard manure alone and combined with immobilizing amendments reduced cadmium accumulation in wheat and rice grains grown in field irrigated with raw effluents. *Chemosphere*.199: 468-476. (IF=5.778).
23. Shamshad, S., M. Shahid, M. Rafiq, S. Khalid, C. Dumat, **M. Sabir**, B. Murtaza, A. B. U. Farooq and N. S. Shah. 2018. Effect of organic amendments on cadmium stress to pea: A multivariate comparison of germinating vs young seedlings and younger vs older leaves. *Ecotoxicology and Environmental Safety*151: 91-97. (IF=4.872).
24. Shamshad, S., M. Shahid, C. Dumat, M. Rafiq, S. Khalid, **M. Sabir**, M. Missen, N. S. Shah, A. B. U. Farooq, B. Murtaza and N. Khan. 2018. A multivariate analysis of health risk assessment, phytoremediation potential and biochemical attributes of *Spinacia oleracea* exposed to cadmium in the presence of organic amendments. *International Journal of Phytoremediation*. 21(5): 461-470. (IF=2.528).
25. Murtaza, B., G. Murtaza, **M. Sabir**, G. Owens, G. Abbas, M. Imran and G. M. Shah. 2017. Amelioration of saline-sodic soil with gypsum can increase yield and nitrogen use efficiency in rice-wheat cropping system. *Archives in Agronomy and Soil Science* 63: 1267-1280 (IF 2.138).

26. Aziz, M.A., H.R. Ahmad, D.L. Corwin, **M. Sabir**, K.R. Hakeem and M. Ozturk. 2016. Retention and availability of metals in soils. *Journal of Environmental Engineering and Landscape Management*. 25: 289-296 (Impact Factor 0.591).
27. Iqbal, M.Z. G. Murtaza, S.M. Mehdi, T. Naz, Atique-ur-Rehman, O. Farooq, M. Ali, **M. Sabir**, M. Ashraf, G. Sarwar, and G.D. Laing. 2017. EVALUATION OF PHOSPHORUS AND ZINC INTERACTION EFFECTS ON WHEAT GROWN IN SALINE-SODIC SOIL. *Pakistan Journal of Agricultural Sciences* 54: 531-537. **(Impact Factor 0.609)**.
28. Rehman, M.Z., M. Rizwan, S. Ali, **M. Sabir** and M. I. Sohail. 2017. Contrasting Effects of Organic and Inorganic Amendments on Reducing Lead Toxicity in Wheat. *Bulletin of environmental contamination and toxicology* DOI 10.1007/S00128-017-2177-4 **(Impact Factor 1.412)**
29. Aziz, M.A., H.R. Ahmad, D.L. Corwin, M. Sabir, K.R. Hakeem and M. Ozturk. 2016. Influence of Farmyard manure on Retention and availability of metals in soils. **Journal of Environmental Engineering and Landscape Management**. DOI:10.3846/16486897.2016.1254639. (Impact Factor 0.591).
30. Rehman, M.Z., S. Ali, N. Fatima, B. Yousaf, A. Naeem, M. Sabir, H.R. Ahmad, Y.S. Ok. 2016. Contrasting effects of biochar, compost and farm manure on alleviation of nickel toxicity in maize (*Zea mays* L.) in relation to plant growth, photosynthesis and metal uptake. **Eco-toxicology and Environmental Safety** 133: 218–225 (IF=4.872).
31. Hakeem, K.R., M. Sabir, M. Ozturk, M.S. Akhtar, F.H. Ibrahim, M. Ashraf and M. S. Aqeel Ahmad. 2016. Nitrate and nitrogen oxides: Sources, health effects and their remediation. **Reviews of Environmental Contamination and Toxicology**. DOI: 10.1007/398_2016_1
32. M.Z. Rehman, M.Z., M. Rizwan, **M. Sabir**, Shahjahan, S. Ali and H.R. Ahmad. 2016. Comparative effects of different soil conditioners on wheat growth and yield grown in saline-sodic soils. **Sains Malaysiana** 45: 339–346 (IF=0.643).
33. Murtaza, B., G. Murtaza, M. Sabir, G. Owens, G. Abbas, M. Imran and G. M. Shah. 2016. Amelioration of saline-sodic soil with gypsum can increase yield and nitrogen use efficiency in rice-wheat cropping system. *Archives in Agronomy and Soil Science*. 63(9): 1267-1280. DOI: org/10.1080/03650340.2016.1276285 (IF=2.135).
34. **Sabir, M.**, A. Ali, M. Z. Rehman and K. R. Hakeem. 2015. Contrasting effects of farmyard manure (fym) and **compost** for remediation of metal contaminated soil. **International Journal of Phytoremediation**. 17:613–621. **(Impact Factor 2.528)**.

35. Aziz, H., **M. Sabir**, H. R. Ahmad, T. Aziz, M. Z. Rehman, K. R. Hakeem, and M. Ozturk. 2015. Alleviating effect of calcium on nickel toxicity in rice. **CLEAN Soil Air Water** 43:901-909(**IF 1.603**).
36. Rehman, M.Z., M. Rizwan, A. Ghafoor, A. Naeem, S. Ali, **M. Sabir**, M.F. Qayyum. 2015. Effect of inorganic amendments for in situ stabilization of cadmium in contaminated soils and its phyto-availability to wheat and rice under rotation. **Environmental Science and Pollution Research** 22:16897–16906 (**Impact Factor 3.056**).
37. M.Z. Rehman, M.Z., M. Rizwan, **M. Sabir**, Shahjahan, S. Ali and H.R. Ahmad. 2015. Comparative effects of different soil conditioners on wheat growth and yield grown in saline-sodic soils. 45(3):339-346. **Sains Malaysiana** (In press) (**IF= 0.48**)
38. Usman, M., M.H. Shah, A. Badar, B. Fatima, **M. Sabir** and Q. Zaman. 2014. Media steaming and coco-coir enhance growth of rough lemon (citrus jambhiri L.) Stock. **Pak. J. Agri. Sci.**, 51: 615-623. (IF=0.663).
39. Shahid, M., **M. Sabir**, M.A. Ali and A. Ghafoor. 2014. Effect of organic amendments on phytoavailability of nickel and growth of berseem (*Trifolium alexandrinum*) under nickel contaminated soil conditions. **Chemical Speciation and Bioavailability**. 26:37-42 (IF=1.362).
40. Shahid, M., C. Dumat, B. Pourrut, M. Sabir, E. Pinelli. 2014. Assessing the effect of metal speciation on lead toxicity to *Vicia faba* pigment contents. **Journal of Geological Exploration**. 144:290–297 (IF=3.352).
41. Sabir, M., A. Ali, M. Z. Rehman and K. R. Hakeem. 2014. Contrasting effects of farmyard manure (fym) and compost for remediation of metal contaminated soil. *International Journal of Phytoremediation*. 17(7): 613-621. DOI 10.1080/15226514.2014.898019 (IF=2.528).
42. **Sabir, M.**, K.R. Hakeem, T. Aziz, M. Z. Rehman, I. Rashid and M. Ozturk. 2014. High Ni levels in soil can modify growth performance and mineral status of wheat cultivars. **CLEAN-Soil, Air, Water** 42: 1263-1271 (IF=1.603).
43. **Sabir, M.**, M.M. Hanafi, M.Z. Rehman, Saifullah, H.R. Ahmad, K.R. Hakeem and T. Aziz. 2013. Comparison of Low Molecular Weight Organic Acids and Ethylene Diamine Tetra Acetic Acid to Enhance Phyto-extraction of Heavy Metals by maize (*Zea mays* L.). **Communications in Soil Science and Plant Analysis** 45:42–52. (**IF=0.767**).
44. Akhtar, M.S., M. Nishigaki, Y. Oki, T. Adachi, Y. Nakashima, G. Murtaza, T. Aziz, **M. Sabir**, Saifullah, M. A. Maqsood, M. Z. Rehman, A. Wakeel, Y. Nakamoto, C. Hartwig. 2013. Solubilization and Acquisition of Phosphorus from Sparingly Soluble Phosphorus Sources and Differential Growth Response of

- Brassica Cultivars Exposed to Phosphorus-Stress Environment. *Communications in Soil Science and Plant Analysis*, 44(7), 1242-1258 (IF=0.767).
45. **Sabir, M.**, M.M. Hanafi, T. Aziz, H.R. Ahmad, M. Zia-Ur-Rehman, Saifullah, G. Murtaza and K.R. Hakeem. 2013. Comparative effect of activated carbon, pressmud and poultry manure on immobilization and concentration of metals in maize (*Zea mays*) grown on contaminated soil. **International Journal of Agriculture and Biology**15: 559–564 (IF=0.822).
 46. **Sabir, M.**, M.M. Hanafi, M.T. Malik, T. Aziz, M.Z. Rehman, H.R. Ahmad, K.R. Hakeem and M. Shahid. 2013. Differential effect of nitrogen forms on physiological parameters and micronutrient concentration in maize (*Zea mays* L.). **Australian Journal of Crop Science**.7(12):1836-1842 (IF=0).
 47. Ghafoor, A., G. Murtaza, M.Z. Rehman, Saifullah and **M. Sabir**. 2012. Reclamation and salt leaching efficiency for tile drained saline-sodic soil using marginal quality water for irrigating rice and wheat crops. **Land Degradation & Development**. 23: 1-9 (IF=3.775).
 48. Murtaza, G., A. Ghafoor, M.Z. Rehman, **M. Sabir** and A. Naeem. 2012. Phytodiversity for Metals in Plants Grown in Urban Agricultural Lands Irrigated with Untreated City Effluent. **Communications in Soil Science and Plant Analysis**, 43:1181–1201(IF=0.767).
 49. Ahmad, H.R., T. Aziz, S. Hussain, M. Akraam, **M. Sabir**, S.U.R. Khashif and **M.M. Hanafi**, 2012. Zinc-enriched farmyard manure improves grain yield and grain zinc concentration in rice grown on a saline-sodic soil. **International Journal of Agriculture and Biology** 14: 787-792(IF=0.822).
 50. Aziz, T., M.A. Maqsood, **M. Sabir** and S. Kanwal. 2011. Categorization of brassica cultivars for phosphorus acquisition from phosphate rock on basis of growth and ionic parameters. **Journal of Plant Nutrition**. 34: 522-533 (IF=1.132).
 51. **Sabir, M.**, A. Ghafoor, Saifullah, M.Z. Rehman, H.R. Ahmad¹ and T. Aziz. 2011. Growth and metal ionic composition of *Zea mays* L. as affected by nickel supplementation in the nutrient solution **International Journal of Agriculture and Biology**13: 186–190 (IF=0.822).
 52. Ahmad, H.R., M.A. Aziz, A. Ghafoor, , M.Z. Rehman, **M. Sabir** and Saifullah. 2011. Wheat Assimilation of Nickel and Zinc added in Irrigation Water as affected by Organic Matter. **Journal of Plant Nutrition** 34: 27-33 (IF=1.132).
 53. Murtaza, B. G.Murtaza, M.Z. Rehman, A. Ghafoor, S. Abubakar and **M. Sabir**. 2011 Reclamation of salt-affected soils using amendments and growing wheat crop. **Soil and Environment** 30(2): 130-136 (IF=0).

54. Saifullah, M.H. Zia, E. Meers A. Ghafoor, G. Murtaza, **M. Sabir**, M.Z. Rehman and F.M.G. Tack. 2010. Chemically enhanced phytoextraction of Pb by wheat in texturally different soils. *Chemosphere* 79:652–658 (IF=5.778).
55. Hussain, A., G. Murtaza, A. Ghafoor, S.M. Mehdi and **M. Sabir**. 2010. Assessment of phosphorus requirements of wheat on different textured alluvial soils through Freundlich type equations. *Communications in Soil Science and Plant Analysis*. 41: 2413-2431 (IF=0.767).
56. Hussain, A., G. Murtaza, A. Ghafoor, S.M.A. Basra, M. Qadir and **M. Sabir**. 2010. Cadmium contamination in soils and crops under long term irrigation with city effluents, tube-well and canal waters in peri-urban areas of Faisalabad, Pakistan. *International Journal of Agriculture and Biology*. 12: 851–856 (IF=0.822).
57. Murtaza, G., A. Ghafoor, U.Z. Kahlon, A.S. Bhatti and **M. Sabir**. 2009. Evaluation of rice and wheat cultivars for tolerance to salinity and sodicity in soil. **Communications in Soil Science and Plant Analysis** 40:1268-1281 (IF=0.767).
58. **Sabir, M.**, A. Ghafoor, Saifullah, M. Z. Rehman and G. Murtaza. 2008. Effect of organic amendments and incubation time on extractability of Ni and other metals from contaminated soils. **Pakistan Journal of Agricultural Sciences** 45:18-24 (IF=0.663).
59. Rehman, M. Z., A. Ghafoor, **M. Sabir**, Saifullah, A. Naeem and H.R. Ahmad. 2008. Extractants for the assessments of phytoavailable cadmium to rice grown in cadmium contaminated soils. **Pakistan Journal of Agricultural Sciences** 45:11-17 (IF=0.663).
60. Saifullah, A. Ghafoor, **M. Sabir**, M. Z. Rehman and M. Yaseen. 2008. Removal of lead from contaminated soils by organic acids **International Journal of Agriculture and Biology** 10:173-178 (IF=0.822).
61. Ghafoor, A. M.Z. Rehman, A. Ghafoor, G. Murtaza and **M. Sabir**. 2008. Fractionation and availability of cadmium to wheat as affected by inorganic amendments. **International Journal of Agriculture and Biology** 10:469-474 (IF=0.822).
62. Zia, M.H., Saifullah, **M. Sabir**, A. Ghafoor and G. Murtaza. 2007. Effectiveness of sulphuric acid and gypsum for the reclamation of a calcareous saline-sodic soil under four crop rotations. **Journal of Agronomy and Crop Science**. 193:262-269 (IF=3.057).
63. Waraich, E.A. R. Ahmed. Saifullah and **M. Sabir**. 2007. Nitrogen nutrition and water stress effects on growth and water use efficiency of wheat (*Triticum aestivum* L.). **Pakistan Journal of Agricultural Sciences** 44:64-73 (IF=0.663).

64. Aziz, M.A., A. Ghafoor, Saifullah, H.R. Ahmad and **M. Sabir**. 2007. Effect of glucose and acetic acid on Ni, Pb and Zn transformation in contaminated soils. **Pakistan Journal of Agricultural Sciences** 44:228-235 (IF=0.663).
65. Hussain, S.I., A.Ghafoor, S.Ahmad, G.Murtaza and **M. Sabir**. 2006 Irrigation of crops with raw sewage effluent: hazard and assessment in effluent, soil and vegetables. **Pakistan Journal of Agricultural Sciences** 43(1-2): 97-102(IF=0.663).
66. M. A. Gill, **M. Sabir**, S. Ashraf, Rahmatullah and T. Aziz. 2005. Effect of P-stress on growth, Phosphorus uptake and utilization efficiency of different cotton cultivars. **Pakistan Journal of Agricultural Sciences** 42 (1-2): 42-47(IF=0.663).
67. **Sabir, M.**, M. A. Gill, Rahmatullah, Tariq Aziz and M. A. Maqsood. 2003. Differences among rice cultivars in potassium uptake and its utilization. **Pakistan Journal of Agricultural Sciences** 40: 119-121.

b. Books

1. Ghafoor, A., G. Murtaza, M.Z. Rehman, **M. Sabir**, H.R. Ahmad and Saifullah. 2012. Environmental Pollution: Sources, Causes and Management. Allied Book Center, Urdu Bazar, Lahore- Pakistan. ISBN 978-969-547-018-3
2. Ghafoor, A., G. Murtaza, Saifullah, M.Z. Rehman, **Sabir, M.** and H.R. Ahmad. 2013. Fundamentals of Soil Chemistry. Allied Book Centre, Lahore, Pakistan. ISBN: 978-969-547-019-0.
3. 2. Hakeem, K.R., M. Sabir, MunirOzturk and A. Murmut. 2015. Soil Remediation and Plants: Prospects and Challenges. Elsevier, San Diego, CA. ISBN-9780127999371
4. 3. Hakeem, K.R., J. Akhtar and Sabir, M. 2016. Soil Science: Agricultural and Environmental Perspectives, Springer, Switzerland ISBN 978-3-319-344515.
5. 4. Sabir, M., J. Akhtar and K.R. Hakeem. 2017. Soil Science: Basic Concepts and Applications. University of Agriculture, Faisalabad. ISBN 978-969-8237-93-6. <http://onlinebooks.uaf.edu.pk/BookDetails.aspx?BookId=15#>

c. Book Chapters

1. Sultana, S., M. Sabir, Saifullah, H.R. Ahmad, and G. Murtaza. 2023. Contamination of Sewage Water with Active Pharmaceutical Ingredients: An Emerging Threat to Food Products and Human Health. In: T. Aftab (ed). Emerging Contaminants and Plants Interactions, Adaptations and Remediation Technologies. Springer Nature Switzerland ISBN 978-3-031-22268-9 pp193-232
2. Srivastava, P., N. Bolan, V. Casagrande, J. Benjamin, S.A. Adejumo, M. Sabir, Z.R. Farooqi, Saifullah and A. Sarkar. 2023. Lead in soils: sources, bioavailability, plant uptake, and remediation. In: V. Kumar, A. Sharma and R. Setia (Eds.) Appraisal of metal(loids) in the ecosystem. Elsevier Radarweg, Amsterdam, Netherlands. ISBN: 978-0-323-85621-8

3. S. Preshant, N. Bolan, V. Casagrande, J. Benjaminf, S.A. Adejumo, **M. Sabir**, Z..R. Farooqi and Saifullah. 2023. Cobalt in soils: sources, fate, bioavailability, plant uptake, remediation, and management. In: V. Kumar, A. Sharma and R. Setia (Eds.) Appraisal of metal(oids) in the ecosystem. Elsevier Radarweg, Amsterdam, Netherlands. ISBN: 978-0-323-85621-8
4. Farooqi, Z.R., M. Sabir, A. Qadeer, A. Naeem, G. Murtaza and H. Yousaf. 2022. Understanding the causes of climatic change in the environment. In: Bandh, S.A. (ed), Climate Change, Springer Nature, DOI: doi.org/10.1007/978-3-030-86290-9_3
5. Ahmad, H.R., Z.R. Farooqi, M. Sabir and M.F. Sardar. 2022. Brick Kilns: Types, emissions, environmental impacts and their remedial measures. In: Ozturk et al., (eds.), Biodiversity, Conservation and Sustainability in Asia. Springer Nature, DOI: doi.org/10.1007/978-3-030-73943-0_52
6. Farooqi, Z. U. R., Sabir, M., Zia-Ur-Rehman, M., & Hussain, M. M. (2020). Mitigation of Climate Change Through Carbon Sequestration in Agricultural Soils. In Climate Change and Agroforestry Systems (pp. 87-118). Apple Academic Press. ISBN: 978-1-77188-822-6
7. Ahmad, H.R., M. Sabir, M.Z. Rehman, T. Aziz, M.A. Maqsood, M.A. Ayub and A. Shahzad. 2020. Wastewater Irrigation-sourced plant nutrition: concerns and prospects. In: Plant Micronutrients: Deficiency and Toxicity Management. ISBN 978-3-030-49855-9. Springer Nature Switzerland.
8. Farooqi, Z. U. R., **Sabir, M.**, Zeeshan, N., Murtaza, G., Hussain, M. M., & Ghani, M. U. (2020). Vehicular Noise Pollution: Its Environmental Implications and Strategic Control. In Autonomous Vehicle and Smart Traffic. IntechOpen. ISBN 978-1-78984-337-8.
9. Farooqi, Z. U. R., **Sabir, M.**, Zia-Ur-Rehman, M., & Hussain, M. M. (2020). Mitigation of Climate Change Through Carbon Sequestration in Agricultural Soils. Climate Change and Agroforestry Systems: Adaptation and Mitigation Strategies, 87. ISBN 9780429286759.
10. Farooqi, Z. U. R., **Sabir, M.**, Zeeshan, N., Naveed, K., & Hussain, M. M. (2018). Enhancing carbon sequestration using organic amendments and agricultural practices. Carbon Capture, Utilization and Sequestration. ISBN 978-1-78923-764-1.
11. Murtaza, B., G. Murtaza, **M. Sabir**, M. Amjad, M. Imran. 2016. Nitrogen Management in Rice-Wheat Cropping System in Salt-Affected Soils. In: Hakeem, K.R., J. Akhtar and **Sabir, M.** 2016. Soil Science: Agricultural and Environmental Perspectives, Springer, Switzerland ISBN 978-3-319-34451-5
12. Shahid, M. A. Ahmad, S. Khalid, H.F. Siddique, M.F. Saeed, M. R. Ashraf, **M. Sabir**, N.K. Niaz, M. Bilal, S.T.A. Naqvi, I. Bibi, E. Pinelli. 2016. Pesticides

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13. Khan, W. T. Aziz, M.A. Maqsood, **M. Sabir**, H.R. Ahmad, P.A. Ramzani and M. Naseem. 2016. Silicon: a beneficial nutrient under salt stress, its uptake mechanism and mode of action. In: Hakeem, K.R., J. Akhtar and **Sabir, M.** 2016. Soil Science: Agricultural and Environmental Perspectives, Springer, Switzerland ISBN 978-3-319-34451-5
 14. Ahmad, H.R., T. Aziz, M.Z. Rehman, **M. Sabir** and H. Khalid. 2016. Sources and Composition of Wastewater: Threats to Plants and Soil Health. In: Hakeem, K.R., J. Akhtar and **Sabir, M.** 2016. Soil Science: Agricultural and Environmental Perspectives, Springer, Switzerland ISBN 978-3-319-34451-5
 15. Naeem, A., **M. Sabir**, Saifullah and S. Bibi. 2017. Soil, earth and environment. In: In: Sabir, J. Akhtar and K.R. Hakeem. Soil Science: Concepts and Applications, University of Agriculture, Faisalabad. ISBN 978-969-8237-93-6. <http://onlinebooks.uaf.edu.pk/Chapter.aspx?ChapId=204>
 16. **Sabir, M.**, M.Z. Rehman, Saifullah and Z. Shah. 2017. Chemical properties of soils In: Sabir, J. Akhtar and K.R. Hakeem. Soil Science: Concepts and Applications, University of Agriculture, Faisalabad. ISBN 978-969-8237-93-6. <http://onlinebooks.uaf.edu.pk/Chapter.aspx?ChapId=207>
 17. Maqsood, M.A., T. Aziz, **M. Sabir**, A. Wakeel, Sanaullah and M.Z. Rehman. 2017. Soil organic matter. In: In: Sabir, J. Akhtar and K.R. Hakeem. Soil Science: Concepts and Applications, University of Agriculture, Faisalabad. ISBN 978-969-8237-93-6. <http://onlinebooks.uaf.edu.pk/Chapter.aspx?ChapId=211>
 18. **Sabir, M.**, M. M. Hanafi and K. R. Hakeem. 2015. Sulfur nutrition of oil palm for enhancing oil yield in tropics. In Hakeem et al (Eds). Crop production and global environmental issues. **Springer, Netherland**. ISBN: 978-3-319-23162-4. pp 349-368
 19. Aziz, T., M. A. Maqsood, S. Kanwal, S. Hussain, H.R. Ahmad and **M. Sabir**. 2015. Fertilizers and environment: issues and challenges. In Hakeem et al (Eds). Crop production and global environmental issues. **Springer, Netherland**. ISBN: 978-3-319-23162-4. pp 575-598
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 21. Rehman, M.Z., M. Sabir, M. Rizwan, Saifullah, H.R. Ahmed and M. Nadeem. 2014. Remediating cadmium contaminated soils by growing grain crops using inorganic amendments. In: K. Hakeem et al. (eds.), Soil Remediation and plants:

- Prospects and Challenges. Academic press, Elsevier, San Diego, USA. <http://dx.doi.org/10.1016/B978-0-12-799937-1.00013-9>
22. Saifullah, M. Shahid, M.Z. Rehman, M. Sabir and H.R. Ahmad. 2014. Phytoremediation of Pb Contaminated Soils using Synthetic Chelates. In: K. Hakeem et al. (eds.), Soil Remediation and plants: Prospects and Challenges. Academic press, Elsevier, San Diego, USA. <http://dx.doi.org/10.1016/B978-0-12-799937-1.00014-0>
 23. Hakeem, K.R., R. Chandna, R. Ul Rehman, I. Tahir, **M. Sabir** and M. Iqbal. 2013. **Unravelling salt-stress in plants through proteomics**. In: P. Ahmed et al. (eds.), Salt Stress in plants: Signaling, Omics and Adaptations. Springer, New York, DOI 10.1007/978-1-4614-6108-1.
 24. Aziz, T., **M. Sabir**, M. Farooq, M.A. Maqsood, H.R. Ahmad and E.A. Warraich. 2013. **Phosphorus Deficiency in Plants: Responses, Adaptive Mechanisms, and Signaling**. In: K. Hakeem et al. (eds.), Plant signaling: Understanding the molecular cross-talk, Springer, India, New Delhi DOI 10.1007/978-81-322-1542-4_7.
 25. Hakeem, K.R., **M. Sabir**, F. Khan and R. Ul Rehman. **Nitrogen regulations and signaling in plants**. In: K. Hakeem et al. (eds.), Plant signaling: Understanding the molecular cross-talk, Springer, India, New Delhi, DOI 10.1007/978-81-322-1542-4_7.
 26. Ghulam Murtaza, Behzad Murtaza, Nabeel Khan Niazi and **Muhammad Sabir**. 2013. Soil Contaminants: Sources, Effects and Approaches for Remediation. In: Parvaiz Ahmad, Mohd Rafiq Wani, M MAzooz, Lam Son Phan Tran (eds.), Improvement of Crops in the Era of Climatic Changes. Springer publisher, Dordrecht, The Netherlands (In Press).

d. Proceedings of Conferences

1. Aziz, T., M. A. Gill, Rahmatullah and **M. Sabir**. 2004. Mineral nutrition of fruit trees. pp. 28-33. Proc. Symp. Plant nutrient management for horticultural crops under water-stress conditions held at Quetta, Pakistan.
2. Ghafoor, A., **M. Sabir**, M. Arshad, G. Murtaza and S.I. Hussain. 2007. Response of Brackish Water Management Strategies with and without Cotton Crop on Moderately Salt-affected Soil. Proc. International conference on productivity and growth in agriculture: Strategies and interventions. Dec 6-7, 2006. Faculty of Agricultural Economics and Rural Sociology, University of Agriculture Faisalabad.
3. Ghafoor, A., M.Z. Rehman. G. Murtaza, Saifullah, A. Naeem and **M. Sabir**. 2007. availability of cadmium to wheat as affected by soil-applied inorganic amendments. Proc. International conference on productivity and growth in

agriculture: Strategies and interventions. Dec 6-7, 2006. Faculty of Agricultural Economics and Rural Sociology, University of Agriculture Faisalabad.

4. Saifullah, A. Ghafoor and **M. Sabir**. 2008. Effect of EDTA on the growth and phytoremediative ability of wheat grown in heavy metal contaminated soil. Proceedings of the first bridging workshops "Sustainable management of wastewater for agriculture" 11-15 November, 2007, International center for agricultural research in the dry areas (ICARDA) and international water management institute (IWMI), Aleppo, Syria.
5. Ghafoor, A., M.Z. Rehman, Saifullah and **M. Sabir**. 2009. Land and water resources in Pakistan: Degradation and sustainability issues. Proceedings of the Conference "Agriculture: Challenges, Opportunities and Options under Free Trade Regime held on 28-29 May, 2008 at Faculty of Agricultural Economic and Rural Sociology, UAF.

e. Urdu Articles/Extension Articles/Newspaper Articles

i. Newspaper Articles

1. **Sabir, M.** and A. Ghafoor. 2006. Soil Management for Food Security. Dawn, Economic and Business Review, July 17-23, 2006, P. III.
2. **Sabir, M.,** S.I. Hussain and S. Ullah. 2006. Role of Silicon in Plants. Dawn, Economic and Business Review, October 30-November 5, 2006, P. III.
3. **Sabir, M.** 2006. Geographic information system in reshaping agriculture. Dawn, Economic and Business Review, November 27-December 3, 2006, P. III.

ii, Urdu Articles/Extension Articles

- 1- کھارے پانی اور اصلاح کنندگان کے ذریعے پھور باڑہ زمینوں پر چاول اور گندم کا پائیدار نظام کاشت۔ 2006۔ غلام مرتضیٰ، عبدالغفور، محمد صابر، سیف اللہ۔ انسٹیٹوٹ آف سوائل اینڈ اینوائرنمنٹل سائنسز، زرعی یونیورسٹی فیصل آباد
- 2 شہروں سے خارج ہونے والے فالتو پانی کا آبپاشی کیلئے استعمال اور اس کے نقصانات۔ 2006۔ عبدالغفور، غلام مرتضیٰ، محمد صابر۔ انسٹیٹوٹ آف سوائل اینڈ اینوائرنمنٹل سائنسز، زرعی یونیورسٹی فیصل آباد
- 3- شہروں کے آلودہ پانی کا فصلوں اور چارہ جات کیلئے استعمال اور اس میں موجود دھاتی عناصر کے پودوں پر اثرات۔ 2008۔ عبدالغفور، غلام مرتضیٰ، سیف اللہ، محمد صابر، محمد ضیا الرحمان، آصف نعیم، عبدالقیوم، حفیظ الرحمان۔ انسٹیٹوٹ آف سوائل اینڈ اینوائرنمنٹل سائنسز، زرعی یونیورسٹی فیصل آباد۔
- 4- پاکستان میں نہری پانی کی کمی، اثرات اور احتیاطی تدابیر۔ 2009۔ غلام مرتضیٰ، عبدالغفور، محمد صابر، محمد ضیا الرحمان۔ انسٹیٹوٹ آف سوائل اینڈ اینوائرنمنٹل سائنسز، زرعی یونیورسٹی فیصل آباد۔
- 5- بھجرو غیر کاشت پھور باڑہ زمینوں کی آباد کاری اور اصلاح کیلئے گندم اور جنت کی کاشت۔ 2011۔ غلام مرتضیٰ، بنیر احمد تقی، انوار الحسن، تکلیل انجم، محمد صابر، سیف اللہ۔ انسٹیٹوٹ آف سوائل اینڈ اینوائرنمنٹل سائنسز، زرعی یونیورسٹی فیصل آباد۔
- 6- برسم اور جواری کاشت بذریعہ کھار پانی تھوڑا باڑہ زمینوں کی اصلاح۔ 2011۔ غلام مرتضیٰ، بنیر احمد تقی، انوار الحسن، تکلیل انجم، محمد صابر، سیف اللہ۔ انسٹیٹوٹ آف سوائل اینڈ اینوائرنمنٹل سائنسز، زرعی یونیورسٹی فیصل آباد۔
- 7- فاسفورس اور پوٹاش کی کھادوں کی-خارشات برائے دھان۔ 2022۔ محمد صابر، غلام مرتضیٰ۔ سماجی زرعی ڈائجسٹ اپریل تا جون، زرعی یونیورسٹی فیصل آباد۔

4. Research Projects

a. As Principal Investigator

- Phosphorus and potassium adsorption and desorption behavior of some rice soils of Pakistan and correlation of adsorption-desorption properties with fertilizer recommendations for the rice crop. Funded by **Higher Education Commission of Pakistan**, Islamabad amounting **PKR 4.827 million. Completed.**
- Temporal and spatial assessment of transmittance of potentially toxic metals in soil-plant-human continuum and quantification of human health risk and soil quality indices in sewage irrigated areas. **Higher Education Commission, Islamabad PKR 5.028 Million. Ongoing**

b. As Co-Principal Investigator

- Evaluation of rice in different zones of the Punjab with special reference to arsenic content funded by **Nestle Pakistan Limited** amounting **PKR 1.774 million(Completed)**.
- Evaluation and management of sludge and compost from different sources for sustainable agriculture. Funded by **Higher Education Commission of Pakistan**, Islamabad amounting **PKR 6.328 million. Completed**

5. Conference/workshops attended

1. 10th Intl. Congress of Soil Science Society of Pakistan, March 16-18, 2004. Sindh Agriculture University, Tandojam.
2. International Conference on Citriculture, 28-30th April 2004. University of Agriculture, Faisalabad.
3. Symposium Plant Nutrition Management for Horticultural Crops under Water Stress Conditions. October 5-6, 2004. Agricultural Research Institute, Quetta.
4. First international conference on mango and date palm: Culture and export, 20th - 23rd June, 2005, University of Agriculture, Faisalabad.
5. International symposium on sustainable crop improvement & integrated management. 14-16 September, 2006. Faculty of Agriculture, University of Agriculture Faisalabad Pakistan
6. International conference on saline agriculture. Sustainable agriculture on salt-affected land. Dec 4-6, 2006. SARC, University of Agriculture Faisalabad.
7. International conference on productivity and growth in agriculture: Strategies and interventions. Dec 6-7, 2006. Faculty of Agricultural Economics and Rural Sociology, University of Agriculture Faisalabad.
8. 2006 National seminar on soil care for sustainable environment. May 16-17, 2006. Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad
9. 10th International Congress of Soil Science Society of Pakistan on "Soil management for sustainable agriculture and the environment. March 28-31, 2006. National Agricultural Research center Islamabad.

10. International work shop on allelopathy. Prospects and application. March 19-21, 2007. Department of Agronomy, University of Agriculture, Faisalabad.
11. 2nd International research conference. October 27-28, 2008. University of South Asia, Lahore.
12. 12th Cong. Soil Sci., Soc. Pak., achieving millenium development goals through wise soil management. October 20-23, 2008. NWFP Agricultural University Peshawar.
13. International Conference on “Advance in Agriculture Prospects and Potentials of Natural Recourses in Food Security” 11-13 August 2009 University of Azad Jammu & Kashmir, Faculty of Agriculture Rawalakot
14. International Conference on Sustainable Food Grain Production: Challenges and Opportunities”, October 26-27, 2009 at University of Agriculture, Faisalabad, Pakistan.
15. 13th Congress of Soil Science Society of Pakistan on “Efficient resource management for sustainable agriculture” March 24-27, 2010 at Serena Hotel, Faisalabad, Pakistan.
16. International Science Conference on “Utilization of modern agriculture technology in changing environmental perspectives”. July 21-23, 2010 at Faculty of Agriculture, University of Azad Jammu and Kashmir, Rawalkot
17. 6th Annual International Symposium on Agriculture, 15-18 July 2013, Athens, Greece organized by Athens Institute for Education and Research, Athens, Greece.
18. International Conference “Crop Management in Changing Climate ”11-13, February, 2013, organized by Department of Agronomy, University of Agriculture, Faisalabad
19. 13th International Conference on Environmental Science and Technology Athens, Greece, 5-7 September 2013 organized by Global Network for Science and Technology
20. 2nd International Conference on Global Environmental Challenges held on February 25-26, 2014 at Government College University, Faisalabad on
21. 2nd National Conference on “Advancements in Science and Research (ASR) held on March 17, 2014 at COMSATS Institute of Information Technology, Vehari
22. International Conference Of Environmental and Occupational Health held on January 24, 2014 at Faculty of Medicine and Health Sciences, Universiti Putra Malaysia
23. International Potash Institute-Institute of Soil and Environmental Sciences Capacity Building Seminar on “BalancedUse of Fertilizers for Quality Produce and Sustainable Agriculture” held on August 12, 2014.
24. 15th International congress of Soil Science on “Soil Management in Changing Climate” held on March 18-20, 2014 at NARC, Islamabad.
25. International Conference on “Soil Sustainability for Food Security” held on November 15-17, 2015 at Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad.

26. International Conference on Crop Improvement (ICCI 2015) held on December 2-3, 2015 at Universiti Putra Malaysia.
27. International Conference on “Urban Soils: Issues-Remedies” organized by Society for Environmental Geochemistry and Health held on March 31st to April 1st.
28. International Seminar on “Soil Sustainability for Food Security” organized by Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad held on November 15-17, 2015.
29. International Workshop on “Current Fertilizer Use in Pakistan” organized by Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad in collaboration with ICARDA” held on November 29 to December 1st, 2015.
30. 16th International Congress of Soil Science on “Healthy Soils for Food Security” held on PMAS University of Arid Agriculture, Rawalpindi on March 15-17, 2016.
31. International Conference on Pollution Control and Sustainable Environment held on April 25-26, 2016 at Dubai, UAE
32. South Asian Regional Workshop on Reactive Nitrogen organized by Society for Conservation of Nature held on February 26-27, 2016 at New Dehli, India
33. International Conference on “Agriculture and Environment” organized by New Zealand House of Science at Kuala Lumpur, Malaysia on May 25, 2016.
34. Asia Pacific Biochar Conference 2016, A Shifting Paradigm towards Advanced Materials and Energy/Environment Research organized by Kangwon National University, Korea on October 19-23, 2016.
35. 18th International Conference on Heavy Metals in the Environment on September 12-15, 2016 at Ghent, Belgium.
36. International Agriculture Conference “Feeding 9 Billion Through Sustainable Agriculture” organized by Pakistan Agricultural Scientist Forum, Pakistan at University of Haripur on 8th – 10th December 2016.
37. 16th International Congress of Soil Science “Healthy Soils for Food Security” held on March 15-17, 2016 at Pir Mehar Ali Shah University of Arid Agriculture, Rawalpindi.
38. 4th International conference on Global Environmental Changes” held at May 4-5, 2017. Government College University, Faisalabad, Pakistan.
39. 4th International Conference on “Global Environmental Challenges” held on May 4-5, 2017 at Department of Environmental Sciences and Engineering, Govt College University, Faisalabad.
40. IX International Scientific Agriculture Symposium “Agrosym-2018” held on October 04-07, 2018. Jahorina Mountain, Bosnia and Herzegovina.
41. 17th International Congress of Soil Science “Soil: Ultimate Solution of Food Security and Climate Change held on March 13-15, 2018 at Serena Hotel, Faisalabad
42. Sydney Institute of Agriculture 2018 Research Showcase organized by Sydney Institute of Agriculture, Faculty of Science, University of Sydney, Australia on July 6, 2018.

43. SUNFix Symposium organized by Sydney Institute of Agriculture, Faculty of Science, University of Sydney, Australia on June 29, 2018.
44. 2019 International Conference on “Environmental Toxicology and Health” held on February 25-27, 2019 at Department of Environmental Sciences, COMSATS University Islamabad, Vehari Campus.
45. 2020 18th International Congress of Soil Science “Wise Soil Management Ensures Better Environment and Livelihood” held on February 11-13, 2020 at Sindh Agriculture University Tandojam, Pakistan.

6. Courses/Trainings

1. Basic Hiking Trekking and Mountaineering Training Course organized by Rover Scouts Unit, University of Agriculture, Faisalabad in Collaboration with Alpine Club & Adventure Foundation of Pakistan held on September 17-23, 2001.
2. Research orientation program on research methodology and analytical techniques held on 21st September-6th October, 2004. at University of Agriculture, Faisalabad, Pakistan.
3. 4th international Course on Sustainable Management of Soil and Water Resources organized by International Agricultural Research and Training Center, General Directorate of Agricultural Research and Policy, Ministry of Food, Agriculture and Livestock, Republic of Turkey. (selected)
4. International Workshop on Allelopathy: Current Trends and Future Applications held on March 18-21, 2007 held at Department of Agronomy, University of Agriculture, Faisalabad.
5. Statistica/Minitab Training for Biological Sciences held on August 6-11, 2007 at University of Agriculture, Faisalabad.
6. Lab Safety Course, University of Western Australia, Perth, Western Australia, Australia, 2013
7. Research Orientation Program on Research Methodology and Analytical Techniques held on September 21-October 6, 2014.
8. IPI-ISES Capacity Building Seminar on “ Balance Use of Fertilizers for Quality Produce and Sustainable Agriculture” held on August 12, 2014 at Serena Hotel, Faisalabad.
9. SWAT Model training on “Nutrient flow modeling” organized by National University of Science and Technology (NUST) ISLAMABAD and International Center for Agricultural Research in Dry Areas held on December 21, 2015.
10. International Workshop on “Current Status of Fertilizer Use in Pakistan” held on November 29-December 1, 2015 at Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad.
11. 2015 One Day Workshop on “Contribution of Balanced Use of Fertilizers toward Food Security: A commodity-based workshop” held on October 6, 2015 at Usmania Hotel, Sahiwal
12. Capacity Building Workshop on “Biosafety Measures in Agriculture” held on February 20-21, 2017 at University of Agriculture, Faisalabad.

13. Two Day Workshop on “4R Nutrient Stewardship for Food, Economic and Environmental Security” organized by Food and Agriculture Organization (FAO), United Nations at Serena Hotel, Islamabad.
14. One Day Workshop on 4R Nutrient Stewardship for Food and Economic Security” organized by Food and Agriculture Organization (FAO), United Nations at Serena Hotel, Quetta on September 28, 2016.
15. Capacity building workshop on biosafety measures in agriculture. February 20-21, 2017 organized by Office of Research, Innovation and Commercialization, University of Agriculture, Faisalabad.
16. Resource Person for the participants of “Two Weeks Training Program of Instructors of In-services Agricultural Training Institute” held on 10th of July to 5th of August, 2017 at Department of Continuing Education, University of Agriculture, Faisalabad.
17. One day national policy dialogue on salt-affected soils organized by Food and Agriculture Organization (FAO) of United Nations at Ramada Hotel, Islamabad on March 7th, 2017.

7. Administrative/Departmental Assignments

1. Tutor of tutorial group “IBN-E-SINA-1 (TGM-134)”
2. Appointed as External Examiner for evaluation of thesis of graduate students at COMSATS Institute of Information Technology, Vehari Campus.
3. Member of Scrutiny Committee of Dean Office, Faculty of Agriculture, University of Agriculture, Faisalabad.
4. Reviewer of Research Projects submitted to HEC under National Research Program for Universities (NRPU)
5. Appointed as External Examiner for evaluation of thesis of graduate students at COMSATS Institute of Information Technology, Vehari Campus.
6. Appointed as External Examiner for evaluation of thesis of graduate students at University of Peshawar, Peshawar.
7. Reviewer of the Projects under NRPU program of HEC, Islamabad.
8. Member of Souvenir Committee of the institute for Public Awareness Seminar on “Environmental Challenges” at the eve of World Environment Day (June 5, 2014)
9. Member of Souvenir Committee of the institute for Public Awareness Seminar on “Nuclear and Radiation Safety in Pakistan” (April 22, 2014)
10. Member of Souvenir Committee of the institute for Public Awareness Seminar on “Balanced Fertilization for Quality Food and Sustainable Agriculture (August 12, 2014)
11. Member of Souvenir Committee of the institute for International Seminar on “Soil Sustainability for Food Security” at Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad(November 15-17, 2015)
12. Member of Souvenir Committee of the institute for Purchase Committee for International Workshop on “Current Status of Fertilizer Use in Pakistan” organized by Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad in collaboration with ICARDA” (November 29 to December 1st, 2015)

13. Member of Souvenir Committee of the institute for Transport and Residence Committee for one day Workshop on "Balanced Use of Fertilizers in Pakistan" organized by Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad in collaboration with International Potash Institute (IPI), Switzerland (March 17, 2015)
14. Member of Souvenir Committee of the institute for Souvenir Committee for International Seminar in connection with World Environment Day on "Seven Billion Dreams for Sustainable Life Style" at Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad (June 15, 2015).
15. Member of Souvenirs Committee for World Environment Day celebrated at Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad (April 22, 2016)
16. Member of Souvenirs Committee for seminar on "Importance of potassium and its development in Pakistan organized by Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad (April 18, 2017)
17. Focal person of the Institute for update of website, UAF.

8. Reviewer of journal

1. Chemosphere
2. Communications in Soil Science and Plant Analysis
3. Ecotoxicology and Environmental Safety
4. Environmental Science and Pollution Research
5. International Journal of Phytoremediation
6. Journal of the Science of Food and Agriculture
7. Archives of Agronomy and Soil Science
8. Human and Ecological Risk Assessment: An International Journal
9. Ecological Engineering
10. Land Degradation and Development
11. American Journal of Environmental Sciences
12. American Journal of Agricultural and Biological Sciences
13. Environmental Geochemistry and Health
14. Pakistan Journal of Agricultural Sciences
15. Scientific World Journal
16. International Journal of Agriculture and Biology
17. International Journal of Scientific Foot Prints (University of Gujrat, Gujrat)

9. Awards/Certificates of Appreciation

1. Certificate of Honour awarded by the Vice Chancellor, University of Agriculture, Faisalabad on Pakistan Day Celebrations March 23, 2007.
2. Research Productivity Award 2012 awarded by Pakistan Council for Science and Technology, Ministry of Science and Technology, Govt of Pakistan
3. Endeavor Research Award, 2014, Australia Awards, Govt of Australia
4. Endeavor Executive Award, 2018, Australia Award, Govt of Australia
5. Certificate of Appreciation from Minister of Education, 2018, Govt of Australia

6. Certificate of Appreciation awarded by the President of International Allelopathy Society, National Institute for Agro-Environ. Sciences, TSUKUBA, Ibaraki-Japan