

Publications

1. Batool, W., Saddique, M. A., **Akhter, A.** Khurshid, M., Tariq, H. M., Ali, N., Raza, U., & Zia Ullah, M. 2024. Nematicidal activity of *Pseudomonas* spp. against citrus nematode (*Tylenchulus semipenetrans*). *World Journal of Biology and Biotechnology*, 9(3): 33-37 doi: <https://doi.org/10.33865/wjb.009.03.1345> (HEC-Y category)
2. Waheed, Z., Anwar, W., Anjum, T. **Akhter, A.**, et al. Pyrolysed maize feedstock utilization in combination with *Trichoderma viride* against *Macrophomina phaseolina*. *Sci Rep* 14, 19762 (2024). <https://doi.org/10.1038/s41598-024-70975-6> (impact Factor: 3.8)
3. Abbas, M. T., Anjum, T., Anwar, W., Khurshid, M., & **Akhter, A.** (2024). Characterization and Induction of Biochar Induced *Capsicum annum* Defense Against Bacterial Wilt. *J Soil Sci Plant Nutr*, 24: 6211–6223. <https://doi.org/10.1007/s42729-024-01991-8> (impact Factor: 3.4)
4. Shakeel, I., Khurshid, M., Manzoor, M., Ali, S., **Akhter, A.**, Anwar, W., Mushtaq, Z., Faiq, M., & Abbas, M. (2024). Biochar Improves Tomatoes Growth Challenged With Khokhran Virus Infection. *Biological and Clinical Sciences Research Journal*, 2024(1), 810. <https://doi.org/10.54112/bcsrj.v2024i1.810> (HEC-Y category)
5. Ahmad, C.A, **Akhter, A.**, Haider, M.S., Abbas, M.T., Hashem, A., Avila-Quezada, G.D. and Abd_Allah, E.F. (2024) Demonstration of the synergistic effect of biochar and *Trichoderma harzianum* on the development of *Ralstonia solanacearum* in eggplant. *Front. Microbiol.* 15:1360703. doi: 10.3389/fmicb.2024.1360703 (Impact Factor: 5.2)
6. Nawaz, K., Anwar, W., Subhani, M.N. **Akhter, A.**, Iftikhar, S., Khan, H.A.A, & Shahid, A.A. 2024. Glucanase Gene of *Trichoderma*; New Strategy for the Management of Root Rot Disease in Chili. *J Soil Sci Plant Nutr* 24: 354-370. <https://doi.org/10.1007/s42729-023-01543-6> (impact Factor: 3.9)
7. Rehman, A. Ahmad, F., Abbas, M.T., **Akhter, A.**, Gulsher, M., Saeed, I., Hussain, A. & Rashid, S. (2023). Effect of *Trichoderma viride* and Rice Straw Biochar on the Development of charcoal rot in maize. *Pakistan Journal of Science*, 75(03), 455–467. <https://doi.org/10.57041/pjs.v75i03.985> (HEC-Y category)
8. Ahmed, F. Mushtaq, Z., Itrat, N., Nazir, A., Hussain, A., **Akhter, A.**, Khurshid, M., Saeed, I., Rashid, S., CIG, A., CIG, F. & Siddique, A.R. 2023. Integrated application of organic amendments and mycorrhizae implementation for spinach (*Spinacia oleracea*)

growth and development. *Pakistan Journal of Science*. 75 (03), 433–437. <https://doi.org/10.57041/pjs.v75i03.984> (HEC-Y category)

9. Saeed, A., Abbas, M. T., Khan, H. A. A., Anwar, W., Mushtaq, Z., Anjum, T., & **Akhter, A.** 2023. Impact of rice straw biochar in association with inorganic fertilizers and *Trichoderma harzianum* on charcoal rot (*Macrophomina phaseolina*) of maize. *World Journal of Biology and Biotechnology*, 8(3): 35-42 doi: <https://doi.org/10.33865/wjb.008.03.1142> (HEC-Y category)
10. Asif, M., Haider, M.S., **Akhter, A.** 2023. Impact of Biochar on Fusarium Wilt of Cotton and the Dynamics of Soil Microbial Community. *Sustainability*. 2023; 15(17):12936. <https://doi.org/10.3390/su151712936> (Impact Factor: 3.9)
11. Mushtaq, Z., **Akhter, A.**, Khan, H.A.A., Anwar, W., Hashem, A., Avila-Quezada, G.D., Abd_Allah, E.F. (2023). Impact Assessment of Lead-Tolerant Rhizobacteria to Improve Soil Health Using Indian Mustard (*Brassica juncea*) as an Indicator Plant. *Plants*, 12, 3005. <https://doi.org/10.3390/plants12163005> (Impact Factor: 4.5)
12. Anwar, W., Amin, H., Khan, H.A.A. **Akhter, A.** Bashir, U., Anjum, T., Kalsoom, R., Javed, M.A., Zohaib, K.A. 2023. Chitinase of *Trichoderma longibrachiatum* for control of *Aphis gossypii* in cotton plants. *Sci Rep* 13, 13181. <https://doi.org/10.1038/s41598-023-39965-y> (Impact Factor: 4.6)
13. Ahmad, C.A., Haider, M.S., **Akhter, A.** 2023. Physiological and biochemical characterization of biochar-induced resistance against bacterial wilt of eggplants. *R. Soc. Open Sci.* 10: 230442. <https://doi.org/10.1098/rsos.230442> (Impact Factor: 3.5)
14. **Akhter, A.**, Asif, M.S., Anwar, W., Aftab, Z.E.H., W., Khurshid, M., Hashem, A., Avela-Quezada, G. D., Abd_Allah, E. F. 2023. Biochemical and Physiological Elucidation of Biochar Induced Defense Response Activation Against Bacterial Leaf Spot In Chilies. *Applied Ecology and Environmental Research*. 21(4): 3057-3074. http://dx.doi.org/10.15666/aeer/2104_30573074 (Impact Factor: 0.711)
15. Ahmad, F., Mushtaq, Z., Anwar, W., Nazir, A., **Akhtar, A.**, Liaquat, M., Jaffar, M.T., Chaudhry, A., I. Saeed, I., Khan, H.A.A. (2023). Impact of Siderophore Producing Rhizobacteria on Growth And Iron Content In Potato. *Pakistan. Journal of Science*, 75(2): 338-344. <https://doi.org/10.57041/pjs.v75i02.876> (HEC-Y category)
16. Abbas, M. T., Batool, Z., Ahmad, C. A., Khan, H. A. A. & **Akhter, A.** 2023. Application of modern biotechnology and bioinformatics approaches in agricultural sciences; A

systematic review. *World Journal of Biology and Biotechnology*, 8(2): 13-17 doi: <https://doi.org/10.33865/wjb.008.02.906> (HEC-Y category)

17. Shafi, M.U., Khan, H.A.A., Khan, T., Anwar, W., **Akhter, A.**, and Zubair, M., 2023. Farmers perception of plant protection practices and management of insect pests of rice in Lahore Division, Pakistan. *Journal of Innovative Sciences*, 9(1): 132-143. Doi: <https://dx.doi.org/10.17582/journal.jis/2023/9.1.132.143> (HEC-Y category)
18. Khan, T., Khan, H. A. A., Haider, M. S., Anwar, W., & **Akhter, A.** (2023). Selection for resistance to pirimiphos-methyl, permethrin and spinosad in a field strain of *Sitophilus oryzae*: resistance risk assessment, cross-resistance potential and synergism of insecticides. *Environmental Science and Pollution Research*, 30: 29921–29928 (Impact factor: 5.19)
19. Ashraf, I., Ali, M., Asif, M., Anwar, W., **Akhtar, A.**, Ali, M.A., Bukhari, N.T., Ali, Q., Shafiq, M. (2023). Unveiling antifungal proteins from *Trametes versicolor* as bio-pesticide to inhibit *Alternaria solani*. *Biol. Clin. Sci. Res. J.* 185. 1-8 doi: <https://doi.org/10.54112/bcsrj.v2023i1.185> (HEC-Y category)
20. **Akhter, A.**, Anwar, W., Abbas, M.T., Ibraheem, M and Khurshid, M. (2022). Effect of compost application on tomato root exudates and suppression of *Fusarium oxysporum* f. sp. *lycopersici* (Fol). *Agrobiological Records* 10: 51-58. <https://doi.org/10.47278/journal.abr/2022.024>
21. **Akhter, A.**, Nisar. W. B., Abbas. T. M., Khan. H. A. A, Khurshid. M., Anjum. T., Saeed. A., 2022 Characterization and evaluation of antifungal potential of rhizosphere bacterial communities of rice against *Fusarium moniliforme* and *Rhizoctonia solani*. *Agric. Sci. J.* 4(2): 13-27 <https://doi.org/10.56520/asj.v4i2.149> (HEC-Y category)
22. Haseeb, Z., Farman Ahmad, F., Abbas, M.T., Majid, M., **Akhter, A.**, and Choudhry, A. (2022). Environmental Health And Safety Issues Associated With Industrial Activity In Industrial Estate Lahore. *Pakistan Journal of Science* 74(4): 250-260 (HEC-Y category)
23. Anwar, W., Javed, S., Ahmad, F., **Akhter, A.**, Khan, H.A.A., Kalsoom, R. and Haider, M.S. (2022). *Boeremia exigua* leaf spot: a new emerging threat to *Gossypium Hirsutum* l. In Pakistan. *Plant Protection* 06 (03): 167-174 DOI: 10.33804/pp.006.03.4275 (HEC-Y category)
24. Siddique, A., Mushtaq, Z., Anwar, W., Zohaib, K.A., **Akhter, A.** and Ahmad, F. (2022). Interaction between mycorrhizae and organic amendments to improve growth and

phosphorus uptake in brinjal. *Plant Protection* 06 (03): 233-238 DOI: 10.33804/pp.006.03.4277 (HEC-Y category)

25. Zahra, M.B., Fayyaz, B., Aftab, ZeH., **Akhter, A.**, Bahar, T., Anwar, W. and Haider, M. S. (2022) Characterization and Utilization of Cow Manure Biochar as Soil Amendment for the Management of Northern Corn Leaf Blight. *J Soil Sci Plant Nutr.* 1-16 <https://doi.org/10.1007/s42729-022-00891-z> (Impact Factor: 3.872)
26. Aftab, ZeH., Aslam, W., Aftab, A. Shah, A. N., **Akhter, A.**, and *et al.* (2022). Incorporation of engineered nanoparticles of biochar and fly ash against bacterial leaf spot of pepper. *Sci Rep* 12, 8561. <https://doi.org/10.1038/s41598-022-10795-8> (Impact factor: 4.996)
27. Khan, T., Khan, H. A. A., Khan, M. R., Umer, M., **Akhter, A.**, Akram, W. (2022). Comparative evaluation of four agrochemicals against *Cryptolestes ferrugineus* and *Tribolium castaneum* along with subsequent infection inhibition of aflatoxigenic *Aspergillus* spp. in stored wheat. *Pakistan Journal of Zoology.* 54(4): 1637-1642 <https://dx.doi.org/10.17582/journal.pjz/20201103171143> (Impact factor: 0.831)
28. Raza, S. M. J., **Akhter, A.**, Wahid, F., Hashem, A., & Abd_Allah, E. F. (2022). *Rhizophagus intraradices* and tomato-basil companionship affect root morphology and root exudate dynamics in tomato under fusarium wilt disease stress. *Applied Ecology and Environmental Research.* 20(1): 235-249. https://dx.doi.org/10.15666/aeer/2001_235249 (Impact Factor: 0.816)
29. Hashem, A., **Akhter, A.**, Alqarawi, A. A., Singh, G., Almutairi, K. F., & Abd_Allah, E. F. (2021). Mycorrhizal fungi induced activation of tomato defense system mitigates Fusarium wilt stress. *Saudi Journal of Biological Sciences.* 28: 5442-5450. <https://doi.org/10.1016/j.sjbs.2021.07.025> (Impact factor: 4.219)
30. Rasool, M., **Akhter, A.**, Haider, M. S., (2021). Molecular and biochemical insight into biochar and *Bacillus subtilis* induced defense in tomatoes against *Alternaria solani*, *Scientia Horticulturae*, 285, 110203. <https://doi.org/10.1016/j.scienta.2021.110203>. (Impact factor: 3.463)
31. Rasool, M., **Akhter, A.**, Soja, G., & Haider, M. S., (2021). Role of biochar, compost and plant growth promoting rhizobacteria in the management of tomato early blight disease. *Sci Rep* 11, 6092. <https://doi.org/10.1038/s41598-021-85633-4> (Impact factor: 4.379)

32. Iftikhar, S., Anwar, W., **Akhter, A.**, Ali, S., Khan, H. A. A., Khurshid, M., & Haider, M. S., (2021). Genetic analysis and pathogenic characterization of *Alternaria tenuissima* induced fruit rot of bitter melon. *Biodiversitas*. 22: 615-623. <https://doi.org/10.13057/biodiv/d220213> (SJR: 0.27)
33. Zahra, M. B., Aftab, Z. H., **Akhter, A.**, & Haider, M. S. (2021). Cumulative effect of biochar and compost on nutritional profile of soil and maize productivity. *Journal of Plant Nutrition*. 44(11): 1664-1676. <https://doi.org/10.1080/01904167.2021.1871743> (Impact factor: 1.707)
34. Fahad, S., Saud, S., **Akhter, A.**, Bajwa, A. A., Hassan, S., Battaglia, M., ... & Danish, S. (2021). Bio-based integrated pest management in rice: An agro-ecosystems friendly approach for agricultural sustainability. *Journal of the Saudi Society of Agricultural Sciences*. 20(2): 94-102. <https://doi.org/10.1016/j.jssas.2020.12.004> (SJR: 1.063)
35. Anwar, W., Nawaz, K., Javed, M. A., **Akhter, A.**, Shahid A. A., Haider, M. S., Ur Rehman, M. Z., and Ali, S. (2021). Characterization of fungal flora associated with sternorrhyncha insects of cotton plants. *Biologia*. 76: 533-547 <https://doi.org/10.2478/s11756-020-00549-0> (Impact factor: 1.350)
36. Rasool, M., Ahmad, F., **Akhter, A.**, Khan, H. A. A., Khurshid, M., Anwar, W., Asif, M. S., Waqar, M., Haider, M. S. (2019). Biochemical and molecular analyses of *Alstonia scholaris* L. leaf galls induced by *Pauropsylla tuberculata* (Psyllidae). *Mycopath* 17(2): 79-88
37. Ahmad, F., Anwar, W., Javed, M. A., Basit, R., **Akhter, A.**, Ali, S., Khan, H. A. A., Amin, H., Haider, M. S. (2019). Infection mechanism of *Aspergillus* and *Fusarium* species against *Bemisia tabaci*. *Mycopath* 17 (2): 63-72
38. Anwar, W., Javed, M. A., Shahid AA, Nawaz, K., **Akhter, A.**, Ur Rehman, M. Z., Hameed, U., Iftikhar, S., Haider, M. S. (2019). Chitinase genes from *Metarhizium anisopliae* for the control of whitefly in cotton. *R. Soc. open sci.* 6 (8): 190412. <http://dx.doi.org/10.1098/rsos.190412> (Impact factor: 2.963)
39. Anwar, W., Ali, S., Nawaz, K., Iftikhar, S., Javed, M. A., Hashem, A., Alqarawi, A. A., Abd_Allah, E. F. and **Akhter, A** (2018). Entomopathogenic fungus *Clonostachys rosea* as a biocontrol agent against whitefly (*Bemisia tabaci*), *Biocontrol Science and Technology*, 28 (8): 750-760. doi: 10.1080/09583157.2018.1487030 (Impact factor: 1.665)

40. **Akhter, A.**, Hage-Ahmed, K., Soja, G. and Steinkellner, S. (2016). Potential of *Fusarium* wilt-inducing chlamydospores, *in vitro* behaviour in root exudates and physiology of tomato in biochar and compost amended soil. *Plant Soil*, 406(1-2):425–440. doi: 10.1007/s11104-016-2948-4 (Impact factor: 3.052)
41. **Akhter, A.**, Hage-Ahmed, K., Soja, G. and Steinkellner, S. (2015). Compost and biochar alter mycorrhization, tomato root exudation, and development of *Fusarium oxysporum* f. sp. *lycopersici*. *Front. Plant Sci.* 6: 529. doi: 10.3389/fpls.2015.00529 (Impact factor: 4.495)
42. **Akhter, A.**, S. Akhtar, M. Saeed and S. Mansoor, 2014. Chilli Leaf Curl Betasatellite enhances symptoms induced by Tomato Leaf Curl New Delhi Virus, a bipartite Begomovirus. *Int. J. Agric. Biol.*, 16 (6): 1225–1228 (Impact factor: 0.822)
43. **Akhter, A.**, J. Qazi, M. Saeed and S. Mansoor, 2009. A severe leaf curl disease on chilies in Pakistan is associated with multiple begomovirus components. *Plant Dis.*, 93 (9): 962. doi:10.1094/PDIS-93-9-0962B (Impact factor: 2.449)

Books/Book Chapters

1. **Adnan Akhter**, Muhammad Shafiq, Kramat Ali Zohaib, Waheed Anwar. (2024). Bacterial Endophytes. In Pathogen Resistance and Biodiversity in Agriculture. (pp. 1-19) The Running Line LLC Publishers. USA. ISBN# 979-8-9921800-8-4
2. Waheed Anwar, Farman Ahamd Chaudhry, Muhammad Arslan Abbas, **Adnan Akhter**, Muhammad Saleem Haider. (2024). Biodiversity. In Pathogen Resistance and Biodiversity in Agriculture. (pp. 20-51) The Running Line LLC Publishers. USA. ISBN# 979-8-9921800-8-4
3. Muhammad Saleem Haider, Muhammad Naveed Aslam, Waheed Anwar, **Adnan Akhter**. Plant Pathology. In Pathogen Resistance and Biodiversity in Agriculture. (pp. 79-104) The Running Line LLC Publishers. USA. ISBN# 979-8-9921800-8-4
4. **Akhter, A.**, Abbas, M. T., Anwar, W., Khan, T., & Khan, H. A. A. (2024). Impact of Biochar on Plant Pathogen Control. In Biochar - Solid Carbon for Sustainable Agriculture. (pp. 64-81) Bentham Science Publishers Pte. Ltd. Singapore. DOI: [10.2174/97898152380681240101](https://doi.org/10.2174/97898152380681240101)
5. Mushtaq, Z., Muzammil, A., Bellitürk, K., Anwar, W., **Akhter, A.**, Khan, H. A. A., ... & Rahman, S. U. (2024). Role of Rhizobacteria in Phytoremediation of Heavy Metal. In *Heavy Metal Remediation: Sustainable Nexus Approach* (pp. 183-211). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-53688-5_9