

Dr. Fareeha Shireen

Date of Birth	May 27, 1992
Nationality	Pakistan
Job Position	Assistant Professor (TTS) University of Agriculture, Faisalabad
Email Address	fareeha.shireen@uaf.edu.pk
Current Address	Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan



Academic Qualifications

2016 - 2021	PhD Agriculture (Horticulture) College of Horticulture and Forestry Sciences, Huazhong Agriculture University, Wuhan, PR China
2013 - 2015	M.Sc (Hons.) Agriculture (Horticulture) Institute of Horticultural Sciences University of Agriculture Faisalabad, Punjab, Pakistan
2009 – 2013	B.Sc (Hons.) Agriculture (Horticulture) College of Agriculture University of Sargodha, Punjab, Pakistan

Professional Experience

February 2021-Present	Assistant Professor (TTS) Institute of Horticultural Sciences University of Agriculture, Faisalabad, Punjab, Pakistan
September 2016- June 2021	PhD Scholar Key Laboratory of Horticultural Plant Biology, College of Horticulture and Forestry Sciences, Huazhong Agricultural University, Wuhan Hubei, China.
February 2016-July 2016	Lecturer of Horticulture (Visiting) Arid Agriculture University Rawalpindi, sub- campus Khushab, Pakistan

Research Interest

- Plant nutrition and ion uptake
- Vegetables soilless cultivation
- Plant stress physiology and rootstock-scion interactions to improve abiotic stress tolerance of horticultural crops

Publications

Research Papers

1. Muhammad Atiq, Shariq Mahmood Alam, Muhammad Mohhsin Kaleem, Shah Fahad, Muhammad Atiq Ashraf, Muhammad Asim, Kaijie Zhu, Fareeha Shireen, Junwei Liu, and Hanzi He. 2026. Unlocking plant abiotic stress resilience through biostimulants and omics-driven innovations. *Journal of Integrative Plant Biology*. 68.
2. Muhammad Ahtisham Mushtaq, Muhammad Ateeq, Muhammad Ikram, Shariq Mahmood Alam, Muhammad Mohsin Kaleem, Muhammad Atiq Ashraf, Muhammad Asim, Khalid F. Almutairi, Mahmoud F. Seleiman and Fareeha Shireen. 2025. Securing fruit trees future: AI-driven early warning and predictive systems for abiotic stress in changing climate. *Plant Stress* 17: 100953
3. Muhammad Atiq Ashraf, Ahmad Satar Khan, Fareeha Shireen, Shumaila Nawaz, Saqib Ayyub, Samim Mohibullah, Muhammad Asim, Talha Riaz, Burhan Khalid, Muhammad Azam and Muhammad Ateeq. 2025. Peach diseases in a changing climate: Pathogens, resistance, and sustainable solutions. *Microbial Pathogenesis* 209: 108110
4. Faisal Hayat, Xiaoyun Zhang, Mohammad Alyafei, Fareeha Shireen, Ummara Khan, Sumera Asghar, Sezai Ercişli, Karthishawaran Kandhan, Mohammed S. Sheteiwy, Yali Zhang and Xiaoyan Lu. 2025. Protective role of salicylic acid against abiotic stresses in horticultural crops: A review. *Turkish Journal of Botany* 49:449-463
5. Muhammad Awais Ghani, Misbah Azam, Basharat Ali, Muhammad Azam, Rashad Waseem Khan Qadri, Khurram Ziaf, Muhammad Muzammil Jahangir, Fareeha Shireen and Muhammad Mehran Abbas. 2025. Salicylic acid-induced thermotolerance and antioxidant enzyme modulation in sponge gourd (*Luffa cylindrica*) seedlings. *Journal of Horticultural Science and Technology* 8: 125-130.
6. Khurram Ziaf, Iqra Mumtaz, Yasir Majeed, Muhammad Awais Ghani, Fareeha Shireen, Iftikhar Ahmad, Nazar Faried and Hamza Mujahid. 2024. Grafting of watermelon onto local and exotic rootstocks as mean to improve plant growth, production and quality. *Pakistan Journal of Agricultural Sciences* 61:1147
7. Muhammad Awais Ghani, Muhammad Mehran Abbas, Basharat Ali, Qumer Iqbal, Javed Iqbal, Khurram Ziaf, Sahar Nawaz, Muhammad Azam, Rashad Waseem Khan Qadri, Fareeha Shireen, Anam Noor and Muhammad Muzammil Jahangir. 2023. Optimization of turnip growth through foliar application of glutamic acid under saline conditions. *Emirates Journal of Food and Agriculture*. 35: 370-378
8. Muhammad Mohsin Kaleem, Muhammad Azher Nawaz, Xiaochen Ding, Suying Wen, Fareeha Shireen, Jintao Cheng, Zhilong Bie, 2022. Comparative analysis of pumpkin rootstocks mediated impact on melon sensory fruit quality through integration of non-targeted metabolomics and sensory evaluation. *Plant Physiology and Biochemistry*. 192: 320-330.
9. Hamza Sohail, Iqra Noor, Muhammad Azher Nawaz, Mingru Ma, Fareeha Shireen, Yuan Huang, Li Yan and Zhilong Bie. 2022. Genome-wide identification of plasma-membrane

- intrinsic proteins in pumpkin and functional characterization of *CmoPIP1-4* under salinity stress. *Environmental and Experimental Botany*. 202: 104995
10. Fareeha Shireen, Muhammad Azher Nawaz, Junyang Lu, Mu Xiong, Mohsin Kaleem, Yuan Huang, Zhilong Bie. 2021. Application of boron reduces vanadium toxicity by altering the subcellular distribution of vanadium, enhancing boron uptake and enhancing the antioxidant defense system of watermelon. *Ecotoxicology and Environmental Safety*. 226: 112828.
 11. Junyang Lu, Fareeha Shireen, Fei Cheng and Zhilong Bie. 2021. High relative humidity improve chilling tolerance by maintaining leaf water potential in watermelon seedlings. *Plant Physiology and Biochemistry*. 166: 818-826.
 12. Fareeha Shireen, Muhammad Azher Nawaz, Mu Xiong, Adeel Ahmad, Hamza Sohail, Zhi Chen, Yehia Abouseif, Yuan Huang and Zhilong Bie. 2020. Pumpkin rootstock improves the growth and development of watermelon by enhancing uptake of boron and regulating gene expression. *Plant Physiology and Biochemistry*. 154: 204-218.
 13. Ahmad Raza, Imtiaz A Warraich, Muhammad Azher Nawaz, Muhammad Asim, Abdul Aziz, Fareeha Shireen and Malik Abdul Rehman. 2020. Does furrow irrigation system improve yield and water use efficiency of Kinnow mandarin (*Citrus reticulata* Blanco)? *International Journal of Agricultural Extension*. 8: 199-206.
 14. Fareeha Shireen, Muhammad Azher Nawaz, Chen Chen, Qikai Zhang, Zuhua Zheng, Hamza Sohail, Jingyu Sun, Haishun Cao, Yuan Huang and Zhilong Bie. 2018. Boron: Functions and approaches to enhance its availability in plants for sustainable agriculture. *International Journal of Molecular Sciences*. 19: 1856.
 15. Fareeha Shireen, Muhammad Jafar Jaskani, Muhammad Azher Nawaz and Faisal Hayat. 2018. Exogenous application of naphthalene acetic acid improves fruit size and quality of Kinnow mandarin (*Citrus reticulata*) through regulating fruit load. *The Journal of Animal and Plant Sciences*. 28: 1080-1084.
 16. Muhammad Azher Nawaz, Xiaojie Han, Chen Chen, Zuhua Zheng, Fareeha Shireen, Zhilong Bie and Yuan Huang. 2018. Nitrogen use efficiency of watermelon grafted onto 10 wild watermelon rootstocks under low nitrogen conditions. *Agronomy*. 8: 259.
 17. Muhammad Azher Nawaz, Chen Chen, Fareeha Shireen, Zuhua Zheng, Hamza Sohail, Muhammad Afzal, Muhammad Amjad Ali, Zhilong Bie and Yuan Huang. 2018. Genome-wide expression profiling of leaves and root of watermelon in response to low nitrogen. *BMC Genomics*. 19: 456.
 18. Muhammad Azher Nawaz, Chen Chen, Fareeha Shireen, Zuhua Zheng, Yanyan Jiao, Hamza Sohail, Muhammad Afzal, Muhammad Imtiaz, Muhammad Amjad Ali, Yuan Huang and Zhilong Bie. 2018. Improving vanadium stress tolerance of watermelon by grafting onto bottle gourd and pumpkin rootstock. *Plant Growth Regulation*. 85: 41-56.
 19. Muhammad Azher Nawaz, Yanyan Jiao, Chen Chen, Fareeha Shireen, Zuhua Zheng, Muhammad Imtiaz, Zhilong Bie and Yuan Huang. 2018. Melatonin pretreatment improves vanadium stress tolerance of watermelon seedlings by reducing vanadium concentration in the

leaves and regulating melatonin biosynthesis and antioxidant-related gene expression. Journal of Plant Physiology. 220: 115-127.

20. Muhammad Azher Nawaz, Fareeha Shireen, Yuan Huang, Zhilong Bie, Waqar Ahmed and Basharat Ali Saleem. 2017. Perspectives of vegetable grafting in Pakistan, current status, challenges and opportunities. International Journal of Agriculture and Biology. 9: 1165-1174.
21. Fareeha Shireen, Muhammad Azher Nawaz, Muhammad Jafar Jaskani, Saif Ali, Waqar Ahmad and Basharat Ali Saleem. 2017. Foliar application of 3,5,6-Trichloro-2-pyridyloxyacetic acid for improving fruit size and quality of Kinnow mandarin (*Citrus reticulata* Balanco). Journal of Environment and Agriculture. 2: 238-243.

Book Chapters

Maryum Sadiq, Muhammad Ahmad Afzal, Fareeha Shireen, Nasir Ahmad Khan, Noor Fatima, Sarah Sher Khan, Romana Liaqat Khichi, Amel Amir, Fatima Rahim and Orwa Kainat. 2026. Evaluation of antibiotic potential of Allium Sativum against pathogenic bacteria. In: Natural Products in Modern Medicine. Unique Scientific Publishers

Awards

1. Australia Award Fellowship at University of Sydney, New South Wales, funded by Australian Department of Foreign Affairs and Trade from June 13, 2026 to July 18, 2026.
2. 3-Months short term training at Yangling Vocational and Technical College, China funded by Ministry of National Food Security and Research Islamabad on April 15 to July 15, 2025.
3. Got “Huazhong Agricultural University Scholarship” for PhD in China
4. Best Presenter award in “International Conference of Graduate Students, 2017” held at Huazhong Agricultural University, Wuhan, China.
5. Best Presenter award in “Workshop for International Students of College of Horticulture and Forestry Sciences” held at Huazhong Agricultural University, Wuhan, China.
6. M.Sc Merit Scholarship at University of Agriculture, Faisalabad