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Professional Summary:

An ambitious academician holds Ph.D. and sound knowledge in Horticulture-Olericulture subjects. Possesses 11+ years of diverse teaching experience and is deeply committed to teaching and research. Highly devoted to promoting and ensuring diversity, equity, and inclusion and maintaining learner-centered classrooms. Has published 50+ articles in peer-reviewed journals and conference proceedings, having about 850 citations. I have produced 35+ graduate MSc students under my supervision. Performed many administrative duties. Has organized many international conferences, seminar, and workshops and remained a program committee member of numerous conferences, seminar, workshops.

Major Fields of Interest:

I am interested in interspecific hybridization, polyploidization and abiotic stress. I have experience variation of phenotypic, genetic, and epigenetic (small RNAs) in interspecific hybrids and polyploidization. I am also interested in genetic DNA Markers, Molecular cytogenetics, Genomics, and functional genomics. I like the different species, which include *Brassica*, *Arabidopsis*, cucurbits, melon, carrot, okra, tomato. I am also interested in plant breeding, biotic and abiotic stress. I like the different techniques include *in situ* and southern hybridization, genetics and marker technology, genomics, CRISPR/Cas9, bioinformatics, sequence analysis, fluorescence, and electron microscopy.

Academic Qualifications:

1. 09/2011-12/2014 Ph.D. The phenotypic, genetic and epigenetic variations during wide hybridisation and polyploidisation between *Brassica rapa* and *Brassica nigra* (Zhejiang University, China).
2. 09/2009-08/2011 MSc (Hons) Horticulture, University of Agriculture Faisalabad, Pakistan.
3. 09/2005-06/2009 BSc (Hons) Agriculture, University of Agriculture Faisalabad, Pakistan.

Teaching Experience:

1. 10/2021-Present **Associate Professor (Tenured)**, Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
2. 09/2015-10/2021 Assistant Professor (TTS), Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
3. 05/2010-08/2011 Research Assistant of Vegetables Seed Production, Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.

Key Skills:

1. Interspecific hybridization
2. Polyploidy
3. Vegetable Breeding
4. Vegetable Production and Seed Production
5. Abiotic Stress
6. Molecular Markers and DNA methylation
7. Small RNAs and microRNAs
8. Gene Expression

Courses Taught:

1. Hort-711: Vegetable Breeding
2. Hort-712: Horticulture Seed Science
3. Hort-603: Horticulture Breeding
4. Hort-503: Principal Production Vegetable
5. Hort-504: Vegetable Production
6. Hort-617: Vegetable Seed Production

Professional Administrative Experience:

1. In charge of Vegetable Research Farm
2. In charge of Vegetable Seed laboratory
3. Co-advisor Admission Committee
4. Synopsis Scrutiny Committee

Research Experience:**Ongoing Research Projects:**

1. **Project Manager**, Punjab Agricultural Research Board (PARB), Development and commercialization of tomato developed by inter-and intraspecific hybridization for tolerant to virus, heat, frost, and improvement in shelf life in Punjab, 2023-2026, \$ 0.150 million (Rs. 35.640 million).
2. Co-Principal investigator (Domin: Vegetable Seed Production), Ministry of Planning, Development and Reform Government of Pakistan, Quality Seed Production and Supply to Farming community for ensuring Food Security in Pakistan, 2023-2026, \$ 5.000 million (Rs. 4.500 billion).

Completed Research Projects:

1. **Principal investigator**, Agricultural Linkages Program (ALP) for promoting agriculture research cooperation between Pakistan and USA, Development of F₁ Tomato Hybrid Seed by Inter- and Intra- Specific Hybridization, 2019-2022, CS254, \$0.52 million (Rs. 5.280 million).
2. **Principal investigator**, Higher Education Commission Pakistan, Production of brassica tri-genomic vegetable oil by the interspecific hybridization between *Brassica napus* and *Brassica nigra*, 2016-2017, SRGP-680, \$5000 (Rs. 0.500 million).
3. Co-Principal investigator, Agricultural Linkages Program (ALP) for promoting agriculture research cooperation between Pakistan and USA, strengthening informal indigenous vegetable seed system to enhance nutrition and food security of Pakistan, 2020-2023, CS286, \$0.042 million (Rs. 4.200 million).
4. Co-Principal investigator, R&D for Hybrid seed production of tomato and its genetic purity analysis between University of Agriculture Faisalabad, Pakistan, and Xinjiang Academy of Agricultural Sciences (XAAS) China, 2022-2023, \$0.020 million (RS. 2.000 million).
5. Co-Principal investigator, Endowment Fund Secretariat (EFS) fund by University of Agriculture Faisalabad, Pakistan, and USA. Vegetable Grafting of Capsicum spp. and watermelon, 2019-2021, EFS86, \$0.23 million (Rs. 2.300 million).

Journal Publications:

1. Ahmed AH, Qadri R, Hussain K, Akram MT, Azam M, **Ghani MA**, Khan MM, Rai MA, Ali B, Mustafa AZMA, Elshikh MS, Iqbal R. Mitigating Fruit Drop Challenges: Unraveling the Role of Plant Growth Regulators and Micronutrients on Jujube (*Ziziphus Mauritiana* L.) cvs. in Cholistan Desert, Pakistan. BMC Plant Biology, 2024, Accepted, In Press. (**IF= 4.3**)
2. Abbas MM, **Ghani MA***, Ziaf K, Khan TN, Jahangir MM, Awan FS, Nawaz S, Hussain MM. Development and characterization of F₁ hybrid tomato by inter and intraspecific hybridization. Pakistan Journal of Agriculture Sciences, 2024, 61(1): 199-207. (**IF= 0.748**)

3. Qadri R, Achakzai A, Akram MT, Awais M, Hussain K, Nisar N, Azam M, **Ghani MA**, Khan MM, Khan MM. Physiochemical and mineral characterize at ion of unexplored local grapes (*Vitis vinifera* L.) cultivars growing in Balochistan province, Pakistan. *Acta Scientiarum Polonorum Hortorum Cultus*, 2023. 22(5), 115-130. (IF= 0.7)
4. Ziaf K, Talha HM, **Ghani MA**, Ahmad I, Anwar R, Ali B, Majeed Y, Shakeel A, Iqbal M, Zaid. Differential accumulation pattern of cadmium in plant parts of pea varieties in response to varying cadmium levels. *South African Journal of Botany*, 2023. 161: 599-606. (IF= 3.1)
5. Noor A, Ziaf K, Naveed M, Khan KS, **Ghani MA**, Ahmad I, Anwar R, Siddiqui MH, Shakeel A, Khan AI. L-Tryptophan-dependent auxin producing plant growth promoting bacteria improve seed yield and quality of carrot by altering the umbel order. *Horticulturae*, 2023. 9(9), 954. (IF= 3.1)
6. **Ghani MA***, Abbas MM, Ali B, Iqbal Q, Iqbal J, Ziaf K, Nawaz Sahar, Azam M, Qadri RWK, Shireen F, Noor A, Jahangir MM. Optimizing efficacy of turnip growth through foliar application of glutamic acid under saline conditions. *Emirates Journal of Food and Agriculture*. 2023. 35(4): 370-378. (IF= 1.04)
7. Iqbal J, Shaheen A, **Ghani MA***, Iqbal Q, Azam M, Ali B, Noor A, Anwar A, Bibi M, Iqbal R, Anwar I, Aslam M, Mahmood I. Nutritional and mineral composition analysis of desert plants: a case study. *Emirates Journal of Food and Agriculture*. 2022. 34(10): 882-887. (IF= 1.04)
8. Saleem AM, Ziaf K, Amjad M, Shakeel A, **Ghani MA**, Noor A. Assessment of genetic diversity among okra genotypes through pca and correlation analysis for fruit tenderness, and morphological and yield traits. *Pakistan Journal of Botany*, 2022, DOI: [http://dx.doi.org/10.30848/PJB2023-2\(34\)](http://dx.doi.org/10.30848/PJB2023-2(34)). (IF= 1.2)
9. Munawar S, **Ghani MA***, Ali B, Azam M, Anjum R, Sarwar M, Ahmad T, Noor A, Iqbal Q, Cheema KL, Jahangir MM, Rashid MZ, Ahmad J, Abbas MM. Attenuation of cadmium induced oxidative stress in cucumber seedlings by modulating photosynthesis and antioxidant machinery through foliar applied glutamic acid. *Horticultural Science*, 2022, 49(1): 19-28. (IF= 1.2)
10. **Ghani MA***, Abbas MM, Ali B, Aziz R, Qadri RWK, Noor A, Azam M, Bahzad S, Saleem MH, Abualreesh MH, Alatawi A, Ali S. Alleviating Role of Gibberellic Acid in Enhancing Plant Growth and Stimulating Phenolic Compounds in Carrot (*Daucus carota* L.) under Lead Stress. *Sustainability*, 2021, 13(21): 12329. (IF= 3.251)
11. Asghar R, Ziaf K, Ahmad I, **Ghani MA**, Shahzad U. Sowing times affect flowering, pollen viability and seed yield of *Zinnia elegans* cvs. 'Lilliput' and 'Super Yoga'. *Pakistan Journal of Agriculture Sciences*, 2022. 59(2): 279-287. (IF= 0.748)
12. Ayub M, Abbasi KY, Ahmad S, Anjum N, Azam M, **Ghani MA**, Jahangeer MM, Ashraf MI, Yusuf A, Khan MA, Siddique IM. Foliar application of salicylic acid and calcium chloride enhance heat stress tolerance in tomato. *Plant Cell Biotechnology and Molecular Biology*, 2022, 23(17&18):24-34. (IF= 0.04)
13. Azam M, Ilahy R, Shen J, Qadri R, Iqbal MA, Yasmin Z, Haider S, Khan MA, Jaskani MJ, Malik AU, Hussain S, **Ghani MA**, Feroz A. Exogenous calcium nitrate application delays senescence, enhance nutraceutical properties and antioxidant defense system during storage. *Emirates Journal of Food and Agriculture*. 2021. 33(10): 852-862. (IF= 1.04)
14. Sarwar M, Saleem MF, Ali B, Nadeem M, **Ghani MA**, Zhou WJ, Islam F. Improving thermotolerance in *Gossypium hirsutum* by using signalling and non-signalling molecules under glass house and field conditions. *Industrial Crops & Products*, 2021, 172: 113996. (IF= 5.9)
15. Iqbal P, **Ghani MA***, Ali B, Shahid M, Iqbal Q, Ziaf K, Azam M, Noor A, Cheema KL, Ahmad J. Exogenous application of glutamic acid promotes cucumber (*Cucumis sativus* L.) growth under salt stress conditions. *Emirates Journal of Food and Agriculture*, 2021, 33(5): 407-416. (IF= 1.04)
16. Ziaf K, Amjad M, **Ghani MA**, Ahmad I, Ayub M, Sarwar M, Iqbal Q, Nawaz MA. Comparative efficacy of magnetic field seed treatment and priming in improving growth and

- productivity of okra. The Journal of Animal and Plant Sciences, 2022, 32(1): 84-90. (IF= 0.490)
17. Ayyaz A, Noor Y, Bano H, **Ghani MA**, Javed M, Iqbal M, Athar HUR, Zaffar U, Farooq MA. Effects of exogenously melatonin on growth, photosynthesis, ion accumulation and antioxidant capacity of canola (*Brassica napus* L.) under chromium stress. Pakistan Journal of Botany, 2021, 53(5):1561-1570. (IF= 1.2)
 18. Sultan I, Khan I, Chattha MU, Hassan MU, Barbanti L, Calone R, Ali M, Majid S, **Ghani MA**, Batool M, Izzat W, Usman S. Improved salinity tolerance in early growth stage of maize through salicylic acid foliar application. Italian Journal of Agronomy, 2021, 16: 1810. (IF= 2.300)
 19. Ali S, Akram NA, Rizwan M, Hussain A, Maqbool A, Ahmad A, Ali B, Tanveer A, **Ghani MA**, Nadeem M. Morphological and biochemical responses of different rice varieties exposed to cadmium stress. Pakistan Journal of Agriculture Sciences, 2021, 58(2): 521-528. (IF= 0.748)
 20. Azam M, Qadri R, Aslam A, Khan MI, Khan AS, Anwar R, **Ghani MA**, Ejaz S, Hussain Z, Iqbal MA, Chen J. Effects of Different Combinations of N, P and K at Different Time Interval on Vegetative, Reproductive, Yield and Quality Traits of Mango (*Mangifera Indica*. L) cv. Dusehri. Brazilian journal of biology, 2021, 5(82): e235612 (IF= 1.651)
 21. **Ghani MA***, Mushtaq A, Ziaf A, Ali B, Jahangir MM, Khan RW, Khan I, Azam M, Noor A. Exogenously applied GA₃ promotes plant growth in onion by reducing oxidative stress under saline conditions. TARIM BİLİMLERİ DERGİSİ Journal of Agricultural Sciences, 2021, 27(2): 122-128. (IF= 0.636)
 22. Khan A, Azam M, Shen J, **Ghani MA**, Khan AS, Ahmad S, Iqbal MA, Anjum N, Zhang J, Anjum MA, Jaskani MJ, Ayyub M, Javed A. Overall quality maintenance of grapefruit during cold storage using pre-storage neem leaf extract dipping. Journal of Food Measurement and Characterization, 2021, 15:1727–1736. (IF= 2.431)
 23. **Ghani MA***, Abbas MM, Ali B, Ziaf K, Azam M, Anjum R, Qumer I, Nadeem A, Noor A, Uzma J. Role of salicylic acid in heat stress tolerance in tri-genomic *Brassica napus* L. Bioagro, 2021, 33: 13-20. (IF= 0.460)
 24. **Ghani MA***, Abbas MM, Ziaf K, Ali B, Azam M, Amjad M, Anjum R, Noor A, Mubashir Z. Production and characterization of inter and intraspecific hybridization eggplant. Horticultura Brasileira, 2020, 38(4): 407-414. (IF= 0.845)
 25. Majeed Y, Ziaf K, **Ghani MA**, Ahmad I, Ahmad MA, Abbasi KY, Mujahid H, Cheema KL. Effect of Different Combinations of Organic and Synthetic Sources of Nutrients on Growth, Yield and Quality Parameters of Turmeric Under Faisalabad Conditions. Journal of Environmental & Agricultural Sciences. 2020, 22(4): 1-7.
 26. Farid M, Farid S, Zubair M, **Ghani MA**, Rizwan R, Ishaq HK, Alkahtani SH, Abdel-Daim MM, Ali S. Glutamic Acid-Assisted Phytomanagement of Chromium Contaminated Soil by Sunflower (*Helianthus annuus* L.): Morphophysiological and Biochemical Alterations. Frontiers in Plant Science, 2020, 11:1-14. (IF= 5.753)
 27. Azam M, Hameed L, Qadri R, Ijaz S, Aslam A, Khan MI, Shen J, Zhang J, Nafees M, Ahmad I, **Ghani MA**, Chen J. Postharvest ascorbic acid application maintained physiological and antioxidant responses of guava (*Psidium guajava* L.) at ambient storage. Food Science and Technology, 2020, 40(4): 1-7. (IF= 1.718)
 28. Naeem M, **Ghani MA***, Amjad M, Batool A, Atif RM, Ahmad T, Ali B, Jahangir MM. Estimation of correlation and path coefficient for morphological and quality related traits in pea (*Pisum Sativum* L.). Bangladesh Journal of Botany, 2020, 49(3): 549-555. (IF= 0.308)
 29. Raza A, Ayyub CM, **Ghani MA**, Ahmad N. Assessment of morphological diversity among indigenous cucumber germplasm of Pakistan. Pakistan Journal of Agricultural Sciences, 2020, 57(6), 1573-1580. (IF= 0.748)
 30. **Ghani MA***, Abbas MM, Amjad M, Ziaf K, Ali B, Shaheen T, Awan FS, Khan AN. Production and characterization of tomato derived from Interspecific hybridization between cultivated tomato and its wild relatives. The Journal of Horticultural Science & Biotechnology, 2020, 95:4, 506-520. (IF= 1.9)

31. Ziaf K, Amjad M, Din A, Zubair M, **Ghani MA**. Recovery and efficiency of applied nutrients affect yield and related traits of turnip cultivar purple top white globe. *Pakistan Journal of Agricultural Sciences*, 2020, 57(1),159-164. (IF= 0.748)
32. Ahmad R, Ali S, Abid M, Rizwan M, Ali B, Tanveer A, Ahmad I, Azam M, **Ghani MA**. Glycinebetaine alleviates the chromium toxicity in *Brassica oleracea* L. by suppressing oxidative stress and modulating the plant morphology and photosynthetic attributes. *Environmental Science and Pollution Research*, 2020, 27:1101–1111. (IF= 4.223)
33. Noor A, Ziaf K, Ghani MA, Ayyub CM, Ahamd I, Amjad M. Plant spacing effects on seed yield and quality of carrot cultivar T-29. *Pure and Applied Biology*, 2020, 9(4):2563-2570.
34. Raza A, Ayyub CM, **Ghani MA**, Ahmad N. Assessment of variation in fruit mineral contents of cucumber germplasm of Pakistan. *International Journal of Agricultural and Environmental Research*, 2020, 6(1):35-41.
35. Ahmad T, Zia-ul-Hassan SM, Iqbal Q, **Ghani MA**, Sabir Tariq RM. Effect of PGRs on Vegetative and Reproductive Traits of Bitter Gourd (*Momordica charantia* L). *Journal of Horticultural Science & Technology*, 2019, 2(2): 41-44.
36. Qadri R, Azam M, Khan SB, Khan I, Yang Y, Muzammil MJ, **Ghani MA**. Growth performance of guava cutting under different growing media and plant cutting taking height. *Bulgarian Journal of Agricultural Science*, 2018, 24(2):236–243.
37. Rashad Q, Akram MT, Khan I, Azam M, Nasir N, **Ghani MA**, Tanveer M, Khan MM. Response of Guava (*Psidium Guajava* L.) Softwood Cuttings to Paclobutrazol Application in Different Rooting Media. *Bangladesh Journal of Botany*, 2018, 47(3):361-367. (IF= 0.308)
38. Ahsan M, Jahangir MM, Ayyub CM, Qadri RWK, Azam M, **Ghani MA**. Response of Morphological and Chemical Attributes of Perennial Verbena against Drought Stress. *Open Access Library Journal*, 2018, 5: e4387.
39. Ling Xu, Faisal I, Zhang W, **Ghani MA**, Basharat A, Zhou WJ. 5-aminolevulinic acid alleviates herbicide-induced physiological and ultrastructural changes in *Brassica napus*. *Journal of Integrative Agriculture*, 2017, 125:53-61. (IF= 4.8)
40. Ling Xu, Faisal I, Basharat A, Zengfei P, Li J, **Ghani MA**, Zhou WJ. Silicon and water-deficit stress differentially modulate physiology and ultrastructure in wheat (*Triticum aestivum* L.). *3 Biotech*, 2017, 7:273. (IF= 2.8)
41. Tariq M, Ahmad N, Khan MSA, Hafeez OBA, Mahmood-ur-Rehman M, **Ghani MA**, Zahid M, Anwar MJ. Response of Different Chemicals on Vase Life and Petals Quality of Oriental Lily Cv. 'Crystal Blanca'. *Pure and Applied Biology*, 2017, 6(3): 976-980.
42. Ayyub CM, Shaheen MR, Raza S, Yaqoob MS, Qadri RWK, Azam M, **Ghani MA**, Khan I, Akhtar N. Evaluation of Different Radish (*Raphanus sativus*) Genotypes under Different Saline Regimes. *American Journal of Plant Sciences*, 2016, 7:894-898.
43. Ahmad T, Amjad M, Iqbal Q, Nawaz A, Iqbal J, **Ghani MA**. Effect of different nutrient management practices on sensory and biochemical attributes of carrot (*Daucus carota* L.). 2nd International Conference on Sustainable Agriculture and Environment (2nd ICSAE), September 30-October 3, 2015, Konya, Turkey. 892-905.
44. **Ghani MA**, Li J, Yu N, Raza MA, Cao L, Rao L, Zou X, Chen L. The role of small RNAs in wide hybridisation and allopolyploidisation between *Brassica rapa* and *Brassica nigra*. *BMC Plant Biology*, 2014, 14:272. (IF= 5.3)
45. **Ghani MA**, Li J, Qian S, Liwen C, Linli R, Xiaoxia Z, Chen L. Phenotypic and genetic variation occurred during in wide hybridisation and allopolyploidisation between *Brassica rapa* and *Brassica nigra*. *Scientia Horticulturae*, 2014, 176:22-31. (IF= 4.3)
46. Li J, Sun Q, Zou X, Rao L, Qi Z, **Ghani MA**, Chen L. The role of small RNAs on phenotypes in reciprocal hybrids between *Solanum lycopersicum* and *S. pimpinellifolium*. *BMC Plant Biology*, 2014, 14: 296. (IF= 5.3)
47. Li J, Rao L, Meng Q, **Ghani MA**, Chen L. Production of *Brassica* tri-genomic vegetable germplasm by hybridisation between tuber mustard (*Brassica juncea*) and red cabbage (*B. oleracea*). *Euphytica*, 2015, 204:323-333. (IF= 1.9)

48. **Ghani MA**, Li J, Yu N, Raza MA, Cao L, Rao L, Zou X, Chen L. The high-throughput sequencing of small RNAs profiling in wide hybridisation and allopolyploidisation between *Brassica rapa* and *Brassica nigra*. *Genomics Data*, 2015, 3:1-3.
49. **Ghani MA***, Amjad M, Iqbal Q, Ahmad T, Hafeez OB, Abbas M. Efficacy of plant growth regulators on sex expression, earliness and yield components in bitter melon. *Pak J. Life and social science*, 2013, 11(3):218-224.
50. Basharat A, Wang B, Shafaqat A, **Ghani MA**, Hayat MT, Yang C, Xu L, Zhou WJ. 5-Aminolevulinic Acid Ameliorates the Growth, Photosynthetic Gas Exchange Capacity, and Ultrastructural Changes under Cadmium Stress in *Brassica napus* L. *Journal of Plant Growth Regulation*, 2013, 32: 604-614. (IF= 4.169)

Book Chapter Publication:

1. **Ghani MA**, Zhang L, Li J, Liu B, Chen L. Hybrid Technology in Cruciferous Vegetables. In: Gupta S.K. (ed.) *Biotechnology of Crucifers*. New York, Springer, 2013, pp.209-220.

Manual Publications:

1. Ziaf K, **Ghani MA**, Shakil Amir. Practical Manual for Vegetable Breeding. In: Malik AU (M. ed.) *Horticulture Practical Manual Series 42*. Institute of Horticultural Sciences, University of agriculture Faisalabad, Pakistan, 978-969-2277-27-3 (e-Book).
2. Ashraf MI, **Ghani MA**. Production of Vegetables. Practical Manual. In: Malik AU (M. ed.) *Horticulture Practical Manual Series 09*. Institute of Horticultural Sciences, University of agriculture Faisalabad, Pakistan, 978-969-2277-09-9 (e-Book).
3. Usman M, Fatima B, **Ghani MA**. Practical Manual for Breeding of Horticultural Crops. In: Malik AU (M. ed.) *Horticulture Practical Manual Series 23*. Institute of Horticultural Sciences, University of agriculture Faisalabad, Pakistan, 978-969-2277-43-3 (e-Book).
4. Ziaf K, Ahmad I, **Ghani MA**. Practical Manual for Principles of Flowers and Vegetable Seed Production. In: Malik AU (M. ed.) *Horticulture Practical Manual Series 30*. Institute of Horticultural Sciences, University of agriculture Faisalabad, Pakistan, 978-969-2277-53-2 (e-Book).
5. Ziaf K, **Ghani MA**, Rana MA. Practical Manual for Vegetable and Flowers Seed Production. In: Malik AU (M. ed.) *Horticulture Practical Manual Series 40*. Institute of Horticultural Sciences, University of agriculture Faisalabad, Pakistan, 978-969-2277-61-7 (e-Book).
6. Ziaf K, **Ghani MA**. Practical Manual for Bulb and Root Vegetable Crops. In: Malik AU (M. ed.) *Horticulture Practical Manual Series 43*. Institute of Horticultural Sciences, University of agriculture Faisalabad, Pakistan, 978-969-2277-65-5 (e-Book).

Professional Qualifications:

1. 13-14 December 2023 Innovation & Sustainability in Urban Horticulture by IHS at University of Agriculture Faisalabad, Pakistan.
2. 09 March 2023 Impact of ARRI Varieties and Seed Development System on National Economy organized by Auyb Agricultural Research Institute, Faisalabad, Pakistan.
3. 28 February 2023 Capacity Building Training on Standardization of Brassica and Sunflower Seed Production organized by Auyb Agricultural Research Institute, Faisalabad, Pakistan.
4. 27 February 2023 International Best Practices for Integrated Pest Management and Locust Control organized by ADB (CAB) at University of Agriculture Faisalabad, Pakistan.
5. 16-20 January 2023 Office Management organized by Management and Professional Development Government of the Punjab, Pakistan (MPDD).
6. 20 December 2022 Aflatoxin Biocontrol an Innovative Approach: Regulatory Harmonization in Pakistan for MRLs and Biopesticides organized by CAS-AFS at University of Agriculture Faisalabad, Pakistan.
7. 12-14 December 2022 Modern Fruit Production Technology organized by Chinese Academy of Agricultural Sciences and co-organized by Research Institute of Pomology CAAS China and University of Agriculture Faisalabad Pakistan.

8. 22 September 2022 Hands-on Training on the application of AI, IoT, and Robotics in Kitchen Gardening using Vege-Bot organized by CAS-AFS at University of Agriculture Faisalabad, Pakistan.
9. 16-17 August 2022 3D Landscape Designing organized by University of Agriculture Faisalabad, Pakistan.
10. 7-11 December 2020 Food Processing organized by Xinjiang Agricultural Vocational Technical College and UNI International China.
11. 15-26 December 2017 Modulating Plant microRNAs using Short Tandem Target Mimic (STTM) organized by Department of Biological Sciences, Michigan Technological University, Houghton, Michigan, U.S.A.
12. 19-20 September 2017 Crispr/Cas9 based Genome Editing organized by USA-Pakistan (UCDAVIS & UAF) at University of Agriculture Faisalabad, Pakistan.
13. 8-10 August 2017 Beans with Benefits Potential & Limitations for Mung bean Production organized by University of Agriculture Faisalabad, Pakistan.
14. 06 March to 30 July 2016 Grain Security for Officials from Developing Countries organized by Henan University of Technology, China.
15. 23 November 2016 Dry Chain Technology for reducing post-harvest losses of seeds and grains organized by USA-Pakistan (UCDAVIS & UAF) at University of Agriculture Faisalabad, Pakistan.
16. 17 October 2016 Strategic Use of Digital Technology in University Instruction organized by USA-Pakistan (UCDAVIS & UAF) at University of Agriculture Faisalabad, Pakistan.
17. 01-05 August 2016 Project Management organized by Management and Professional Development Government of the Punjab, Pakistan (MPDD).
18. 09-11 May 2016 Quality Seed, Issues and Options organized by USA-Pakistan (UCDAVIS & UAF) at University of Agriculture Faisalabad, Pakistan (Agricultural Innovation Program).
19. 04-05 April 2016 National Grants Writing Workshop organized by USA-Pakistan (UCDAVIS & UAF) at University of Agriculture Faisalabad, Pakistan.
20. 09-11 November 2015 Building Capacity for Intellectual Property Management and Technology Transfer organized by USA-Pakistan (UCDAVIS & UAF) at University of Agriculture Faisalabad, Pakistan.
21. 04-07 April 2011 Hybrid Breeding in Tomato, Nuclear Institute for Agriculture and Biology (NIAB), Faisalabad, Pakistan.
22. 25-29 April 2011 Safety Measures and Application of Radiation and Isotope in Agriculture, Health and Industry, Nuclear Institute for Agriculture and Biology (NIAB), Faisalabad, Pakistan.

Workshops and Training as Recourse Person/Organizer:

1. 24 June 2024 focal person of organizing committee for one day training workshop on Demonstration of Vegetable Seed Production Technology to Stakeholders at Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
2. 7 March 2024 member of organizing committee seminar for Breeding in Vegetable & Medicinal Crops for Germplasm Diversification and Sustainable Production at Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
3. 28-30 April 2024 member of organizing committee for 3rd Seed Congress at University of Agriculture Faisalabad, Pakistan.
4. 09-10 November 2023 international conference 4th BRI Sino-Pakistan Agriculture Forum 2023 at Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
5. 10 April 2023 One day training workshop “Hands-on Training in Pollination Management of Solanaceous Crops for Hybrid Seed Production at Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
6. 02 November 2022 one day international collaborative workshop on opening ceremony of Chin-Pakistan Horticulture Research and Demonstration Centre (CPHRDC) With Huazhong

- Agriculture University at Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
7. 17-20 October 2022 Former Day/ Community Meeting (Popularization of Home Gardening in Urban and Peri-urban areas of Punjab, at Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
 8. 1 April 2022 One day seminar organized as committee convener of Hand training on Hybrid seed tomato production at Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
 9. 16 March 2022 One day farmer workshop/seminar organized as member on Propagation, canopy techniques and Ber distribution at Experimental Fruit Research Garden Square #32 at Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
 10. 21 October 2021 Convener of organizing international webinar on Advance Breeding in Vegetables at Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
 11. 08 September 2021 member of organizing committee for one day outreach training workshops on modern subtracts, nursing raising protocol for watermelon and chilli and watermelon and chilli grafting at Gujranwala, Pakistan.
 12. 10 March 2021 Member of organizing committee for one day training course Red Palm Weevil control in Date Palm at Horticulture, Gomal University, Dera Ismail Khan, Pakistan.
 13. 02 March 2021 co-convener of organizing committee for one day training Farmers, Stakeholder, and students in Grafting techniques at Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
 14. 26 Feb 2021 One day farmer workshop/seminar organized as member on Papaya transplanting technology at Experimental Fruit Research Garden Square #32 at Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
 15. 22-23 Feb 2021 Member of organizing committee for the International Horticulture E-Conference at University of Agriculture, Faisalabad, Pakistan.
 16. 18 Feb 2021 Member of organizing committee for one day training course Red Palm Weevil control in Date Palm at Horticulture Research station, Bhawalpur, Pakistan.
 17. 1 Sept 2020 One day seminar organized as committee convener on Tomato Seed Germplasm Handling, Packing and Storage at Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
 18. 25 Feb 2020 One day international seminar organized as committee member on Organic Farming–Future Prospects and Challenges at Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
 19. 20 Feb 2020 One day farmer workshop/seminar organized as member on Papaya Nursery Raising & Establishment at Experimental Fruit Research Garden Square #32 at Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
 20. 02 Feb 2020 One day workshop organized as member on one day Kitchen Gardening at Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
 21. 19 Dec 2019 One day farmer workshop/seminar organized as member on Establishment of Papaya Orchard at Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
 22. 21-22 Jan 2019 Member of organizing committee for the International Horticulture Conference at Pak Expo Center Lahore, organized by Government of Punjab and University of Agriculture, Faisalabad, Pakistan.
 23. 03 May 2018 Organizing member for one day 1st Annual Postgraduate Students Research Symposium at University of Agriculture, Faisalabad, Pakistan.
 24. 13-14 Jan 2018 Member of organizing committee for the International Horticulture Conference at Pak Expo Center Lahore, organized by Government of Punjab and University of Agriculture, Faisalabad, Pakistan.

25. 22 Dec 2017 Member of Organizing Committee International Workshop Developing Vegetable Seed Industry Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
26. 21-24 Nov 2016 Member of Organizing Committee conference “2nd Seed Congress” organized by University of Agriculture Faisalabad, Pakistan.
27. 6 April 2016 Member organizing committee “International Seminar on Future Perspectives of Potato Biodiversity & Food Security” Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.
28. 8-13 Feb 2016 One week “Tunnel Farming Training Course” Institute of Horticultural Sciences, University of Agriculture Faisalabad, Pakistan.

Graduate PhD Students under my Supervision:

1. 2022 4th semester of Ph.D. (continue) Oral defended by Hazama Mujahid
2. 2023 2nd semester of Ph.D. (continue) writing research proposal by Saleem
3. 2021 Evaluation and Characterization of Cucumber (*Cucumis sativus* L.) germplasm by Dr. Ahmad Raza

Graduate MSc (Hons) Students under my Supervision:

1. 2024 Physiological and bio-chemical characterization of F₁ radish developed by intra-specific hybridization by Arslan Tahir
2. 2024 Screening of different genotypes of tomato under cold stress by M. Mubashir Mumtaz
3. 2024 Melatonin application enhances growth and productivity of broccoli cultivars under salt stress by Aiman Nadeem
4. 2024 Effect of salinity stress on growth and development of kale by Bakhtawar
5. 2023 Produce F₁ Hybrid Seed of Radish by Intraspecific Hybridization by Samra Anwar.
6. 2023 Foliar Application of Trehalose Improve Salinity Stress Tolerance in Eggplant by Ayesha Ashiq.
7. 2023 Effect of Trehalose on Morphological and Biochemical Attributes of Pea Hybrids (*Pisum sativum* L.) Under Heavy Metal Stress Conditions by Muhammad Usman.
8. 2023 Effects of different spacing and intercropping on Okra seed Production by Ali Farzand
9. 2022 Evaluation of F₁ Hybrids Pea Developed by Autopolyploidization by Mujeeb Ashraf.
10. 2022 Evaluation of F₁ Hybrids of Tomato Developed by Inter and Intra Specific Hybridization by Ahmad Faraz.
11. 2022 Effect of Tree Hallows on Morphological and Biochemical Attributes of Peas (*Pisum Sativum* L.) Under Salt Stress Conditions by Muhammad Rizwan Ashraf.
12. 2021 Production of F₁ Hybrid Pea Seed by Autopolyploidization under the student of Mr. M. Bilal.
13. 2021 Production of F₁ hybrid seed of turnip by autopolyploidization under the student of Mr. Waseem Liaquat
14. 2021 Impact of exogenous application of trehalose on growth, antioxidant machinery and quality of carrot (*Daucus carota* L.) plants subjected to salt stress under the student of Miss Saleha Saeed.
15. 2021 Growth response and fruit yield of pepper grafted on different hot pepper rootstock under the student of Umar Farooq.
16. 2021 Production and characterization of F₁ *Brassica juncea* produced by autopolyploidy under the student of Mr. Jahanzeb Ahmad.
17. 2021 Effect of exogenous application of trehalose on growth and yield of Trigenomic Brassica under salt stress conditions under the student of Mr. Adnan
18. 2020 Optimizing efficacy of Turnip growth through foliar application of Glutamic acid under saline conditions under the student of Miss Mehvish Taj.
19. 2020 Exogenous application of glutamic acid promotes cucumber (*Cucumis sativus*) growth under salt stress conditions under the student of Miss Pakeeza Iqbal.

20. 2020 Exogenous application of glutamic acid promotes radish growth under salt stress conditions under the student of Mr. Awais.
21. 2020 Ameliorating the cadmium stress in hybrid and indigenous cucumber through foliar application of Glutamic acid under the student of Miss Summeya Munawar.
22. 2020 Characterization of exotic genotypes of turnip on the bases of morphological and biochemical analysis under the student of Mr. Ahmad Amin.
23. 2020 Growth response of grafted watermelon on different rootstocks under the student of Mr. Ali Raza.
24. 2020 Effect of naphthalene acetic acid and indole butyric acid on attributes of begonia plant under the student of Miss Hafza Mahek Hamid.
25. 2019 Hybrid seed production by autopolyploidization between *Brassica rapa* and *Brassica oleraceae* under the student of Mr. Muneeb.
26. 2019 F₁ seed production of tri-genomic by autopolyploidization between *Brassica napus* and *Brassica nigra* under the student of Mr. Ali.
27. 2019 Performance of F₂ by segregating population of interspecific cross between *Brassica napus* and *Brassica nigra* under the student of Mr. Muhammad Bilal Ashiq.
28. 2019 Effect of Salt Stress on yield of onion under the salt condition under the student of Miss. Amina.
29. 2019 Effect of exogenous salicylic acid on tri-genomic hybrids of *Brassica napus* under heat stress under the student of Miss Uzma.
30. 2019 Alleviating role of gibberellic acid on the growth of carrot under lead stress under the student of Mr. Saleem Bahzad.
31. 2019 Effect of gibberellic acid, naphthalenacetic acid and ethereal on the yield of cauliflower under the student of Miss Sahar Bari.
32. 2018 F₁ seed production of tri-genomic by interspecific crossing between *Brassica napus* and *Brassica nigra* under the student of Mr. Muhammad Mehran Abbass.
33. 2018 F₁ Hybrid Seed Production of Brassica by Interspecific hybridization between *Brassica juncea* and *Brassica napus* under the student of Mr. Sufyan Ahmad.
34. 2018 Effect of foliar application of salicylic acid and humic acid on growth and yield of potato under the student of Mr. Malik Naqash Taqi.
35. 2018 Effect of exogenous salicylic acid on sponge gourd under heat stress under the student of Miss. Misbah Azam.
36. 2018 Role of salicylic acid against heat stress on cucumber under the student of Mr. Mir Tajammal Abbas.
37. 2018 Effect of Ethrel and Gibberellic Acid on Sex Expression and Seed Production of Snake Gourd (*Trichanunium angura* L.) under the student of Mr. Abdul Rehman.
38. 2017 Hybrid seed production by interspecific crossing between *Brassica rapa* and *Brassica oleraceae* under the student of Mr. Khawaja Muhammad Saim.
39. 2017 Production of F₁ Hybrids by Interspecific Hybridization between *Brassica nigra* and *Brassica oleracea* under the student of Mr. Fraz Davis.

Professional Memberships:

1. 1 January 2016 member of Pakistan Society of Horticulture Scientists, Pakistan.
2. 27 February 2022 member of International Association Seed Industry Scientists, China.

Accomplishments:

1. Higher Education Commission Pakistan's (HEC) approved PhD supervisor.
2. 2011-2014 Awarded PhD scholarship by China scholarship council. (CS # 2011GXZS72).
3. 2014 Awarded the Partial Support for PhD Studies Abroad by Higher Education Commission Pakistan (HEC) in the 17 meeting. (No: 1-8/HEC/HRD/2014/3021).

Services and Contributions:

Editor of Journal:

1. Dr. Basharat Ali, Dr. Afzal Hussain, **Dr. Muhammad Awais Ghani**, Dr. Muhammad Bilal Gill, Guest Editor, Feature Paper in Plant Genes for Abiotic Stress, Gene Journal by MDPI

Reviewer for Journals:

1. BMC Plant Biology
2. Scientia Horticulturae
3. Plant Growth Regulation
4. Scientific Reports
5. Journal of Soil Science and Plant Nutrition
6. Environmental Science and Pollution Research
7. Physiological and Molecular Plant Pathology