

Prof. Dr. Nazim Hussain

Professor, Department of Agronomy
Faculty of Agriculture Sciences and Technology, Bahauddin Zakariya University, Multan, Pakistan

nazimhussain@bzu.edu.pk
Department of Agronomy, Bahauddin Zakariya University, Multan, Pakistan
profiles.bzu.edu.pk/nazimhussain

Scan for my full online profile

EDUCATION

PhD – Agronomy 2003 – 2008
Bahauddin Zakariya University, Multan, Punjab, Pakistan

RESEARCH INTERESTS

plant nutrition; sustainable crop production; organic bio stimulant; organic cotton production; farming system

ACADEMIC & PROFESSIONAL EXPERIENCE

Professor Nov 2011 – Present
Bahauddin Zakariya University, Multan, Punjab, Pakistan

- Teaching, Member of BOS, Member and Chairman of BoF, Member Board of Advance Studies & Research Board, Member Academic Council

RESEARCH PROFILE & METRICS

Publications: **81**

JOURNAL ARTICLES

1. Rafique, T.S., **Hussain**, N., Nawaz, H. et al. (2026). Soil Applied Zinc Sustains Zn bioavailability, Gas Exchange, and Antioxidant Adaptations for Healthy Zn Biofortified Wheat Grain Production under Narrow Row Spacing. *Journal of Soil Science and Plant Nutrition*, *2*(26), 4959-4974.
2. Irrigation Water-Regimes Hamid Nawaz, Nazim **Hussain**, Muhammad Akbar Anjum, Moazzam Jamil, Haseeb-ur-Rehman Aown Sammar Raza, Omer Farooq (2025). Biochar Application Improves the Wheat Productivity under Different. *International Journal of Agriculture and Biology*, *21*(5), 1-19.
3. 2. Muhammad Maqsood, Nazim **Hussain**, Azra Yasmeen, Hamid Nawaz (2025).) Moringa Bio-stimulator with Soil Organic Nitrogen Ameliorated Nitrogen Use Efficiency and Drought Tolerance for Healthy Proso-millet Production. *Journal of Crop Health*, *4*(77), 113.
4. Hamid Nawaz, Malik Muhammad Yousaf, Nazim **Hussain**, Tanveer **Hussain**, Malik Waqar Yousaf, Malik Ibrar Yousaf, Mona S. Alwahibi, Mohamed S. Elshikh, Baber Ali, Rashid Iqbal (2025). Moringa Biopriming with Zn Spray Improved Nutrients Rich Biofortified Chickpea Grains and Drought Tolerance at Reproductive Stages Under Arid Environment. *Journal of Crop Health*, *77*(1), 10.
5. Irrigation Water-Regimes Hamid Nawaz, Nazim **Hussain**, Muhammad Akbar Anjum, Moazzam Jamil, Haseeb-ur-Rehman Aown Sammar Raza, Omer Farooq (2025). Biochar Application Improves the Wheat Productivity under Different. *International Journal of Agriculture and Biology*, *21*(5).
6. Alam J., H. Nawaz, H. Rehman, N. **Hussain** (2022). Potential Effect Of Bed-Furrow Planting Improved The Wheat Grains Productivity Under Drought Stress. *Turkish Journal of Field Crops*, *27*(2), 242-250.
7. M. Arif, N. **Hussaina**, A. Yasmeen, S. Naz, A. Anwarc, S. Mushtaq, J. Iqbal, A. Shaheen, M. Aziz, S. A. H. Bukhari and S. H. Shahh (2022). Exogenous application of bio-stimulant and growth retardant improved the productivity of cotton cultivars under different planting arrangement. *Brazilian Journal of Biology*, *82*(e238812), Brazilian Journal of Biology.
8. N. **Hussain**, A. Yasmeen, and M. Bilal (2021). The application of ammonium sulphate and amino acid on cotton: effects on can improve growth, yield, quality and nitrogen absorption. *Brazilian Journal of Biology*, *82*, 240133.
9. N. **Hussaina**, A. Yasmeen, and M. M. Yousaf (2021). Antioxidant status and their enhancements strategies for water stress tolerance in chickpea. *Brazilian Journal of Biology*, *82*, e237809.
10. N. **Hussaina**, A. Yasmeena, M. M. Yousafa, W. Malika, S. Naza, I. Qadira, B. Saddiqb, A. Shaheenc and R. Iqbalb (2021). Exogenously applied nutrients can improve the chickpea productivity under water stress conditions by modulating the antioxidant enzyme system. *Brazilian Journal of Biology*, *82*, e236251.
11. Ismail M. and N. **Hussain** (2021). Soil applied potassium enhanced the oil contents in hybrid mustard crop under water deficit condition. *Emirates Journal of Food and Agriculture*, *33*(9), 772-780.
12. Nawaz H., Nazim H., Niaz A., Haseeb R. and Javiz A. (2021). Efficiency of Seed Bio-priming Technique for Healthy Mungbean Productivity under Terminal Drought Stress. *Journal of Integrative Agriculture*, *20*, 87-99.
13. N. **Hussain**, A. Yasmeen, M.A. Afzal (2020). Exogenously applied growth promoters modulate the antioxidant enzyme system to improve the cotton productivity under water stress conditions. *Italian Journal of Agronomy*, *15*, 1537.
14. N. **Hussain**, A. Anwar, A. Yasmeen, M. Arif, S. Naz, M. Bibi, J. Iqbal, I. Qadir, M. N. Salim and S. Latif (2020). Resource use efciency of cotton in improved vs conventional planting geometry with exogenous application of bio-stimulant and synthetic growth retardant. *Brazilian Journal of Biology*, 1519-6984.
15. Sagheer Ahmad, Nazism **Hussain** (2019). Effect on yield and fiber quality traits of transgenic cotton (Gossypium hirsutum L.) by soil and foliar application of potassium. *International Journal of Biosciences (IJB)*, *12*(2), 326-338.
16. Sagheer Ahmad, Nazim **Hussain**, Niaz Ahmed, Syed Muhammad Zaka (2019). Influence of boron nutrition on physiological parameters and productivity of cotton (Gossypium hirsutum L.) crop. *Pakistan Journal of Botany*, *51*(2).
17. Rehman H., M. Ikram, N. **Hussain**, H. Nawaz, U. Yaqoob, I. Haider (2019). Impact of different priming methods on the performance of Maize (Zea mays L.). *International Journal of Botany*, *4*(5), 85-88.
18. M. Arif, N. **Hussain and A. Yasmeen** (2019). Influence of bio-stimulant and potassium sources on the productivity of cotton. *J. Anim. Plant Sci*, *29*(6), 1643-1653.
19. Muhammad Arif, Shadia Kareem, Nariman Ahmad, Nazim **Hussain**, Azra Yasmeen, Adeel Anwar, Safina Naz, Javed Iqbal, Ghulam Shah, Muhammad Ansar (2019). Exogenously Applied Bio-Stimulant and Synthetic Fertilizers to Improve the Growth, Yield and Fiber Quality of Cotton. *Sustainability*, *11*(7), 2171.
20. Azra Yasmeen, Muhammad Arif, Nazim **Hussain**, Safina Naz and Adeel Anwar (2018). Economic Analyses of Sole and Combined Foliar Application of Moringa Leaf Extract (MLE) and K in Growth and Yield Improvement of Cotton. *International Journal of Agriculture and Biology*, *20*(4), e1814-9596.
21. Hamid N, N **Hussain**, A Yasmeen, SAH Bukhari and M B **Hussain** (2017). SEED PRIMING: A POTENTIAL STRATAGEM FOR AMELIORATING SOIL WATER DEFICIT IN WHEAT. *Pakistan Journal of Agricultural Sciences*, *54*(02), 241-254.
22. Azra Yasmeen, Muhammad Arif, Nazim **Hussain**, Waqas Malik and Ihsan Qadir (2016). Morphological, Growth and Yield Response of Cotton to Exogenous Application of Natural Growth Promoter and Synthetic Growth Retardant. *International Journal of Agriculture and Biology*, *18*(6), 1814-9596.
23. Hamid Nawaz, Azra Yasmeen, Muhammad A. Anjum, Nazim **Hussain** (2016). Exogenous Application of Growth Enhancers Mitigate Water Stress in Wheat by Antioxidant Elevation. *Frontiers in Plant Science*, *7*, 1-11.
24. Hamid N., N. **Hussain**, M.I.A. Rehmani, A. Yasmeen, M. Arif (2016). Comparative performance of cotton cultivars under conventional and ultra-narrow row (UNR) spacing. *Pure Appl. Biol*, *5*(1), 15-25.
25. Rehmani M.I.A., M.F. Fareed, A.M. Alvi, M. Ibrahim, N. **Hussain**, S. **Hussain**, J. Iqbal, M.A. Bashir, H. Nawaz (2016). Delayed wheat (Triticum aestivum L.) cultivation and role of diverse seeding rates and row spacings under semiarid agro-climatic situations. *Pure and Applied Biology*, *5*(1), 72-85.
26. Tahir M., A. Nadeem, N. **Hussain**, M. Ijaz, M. Shahid, M.B. Khan, H. Ali. (2015). Plant growth promoting rhizobacteria improve growth of nursery translplanted rice under agro ecological conditions of Southern Punjab. *Envr. Plant Sci.*, *1*, 22-27.
27. Hamid N., Nazim **Hussain**, Azra Yasmeen (2015). Growth, yield and antioxidants status of wheat (Triticum aestivum L.) cultivars under water deficit conditions. *Pakistan Journal of Agricultural Sciences*, *54*(4), 953-959.
28. Hamid Nawaz, Nazim **Hussain and Azra Yasmeen** (2015). Pictorial review of critical stages at vegetative and reproductive growth in wheat for irrigation water regimes. *Appl. Sci. Bus. Econ*, ISSN 2312-9832.
29. Hamid N., N. **Hussain**, A. Yasmeen, M. Arif, M. **Hussain**, M.I.A Rehmani, M.B. Chattha and A. Ahmad (2015). Soil Applied Zinc Ensures High Production and Net Returns of Divergent Wheat Cultivars. *Journal of Agricultural, Food, and Environmental Sciences*, 2313-8629.
30. Nazim **Hussain**, Azra Yasmeen, Muhammad Arif and Hamid Nawaz (2014). Exploring the role of row spacing in yield improvement of wheat cultivars. *Pak. J. Agri. Sci.*, *51*(1), 1-7.
31. Nawaz H., N. **Hussain**, A. Yasmeen, S. Alam, H. M. Nasrullah (2014). Screening Faisalabad flora for allelopathic potential. *Journal of Research (Science)*, *24-25*, 01-23.

32. Muhammad Ishaq Asif Rehmani, Guangbin Wei, Nazim **Hussain**, Chengqiang Ding, Ganghua Li, Zhenghui Liu, Shaohua Wang, Yanfeng Ding (2014). Yield and quality responses of two indica rice hybrids to post-anthesis asymmetric day and night open-field warming in lower reaches of Yangtze River delta. *Field Crops Research*, *156*, 231-241.
33. Azra Yasmeen, Shahzad M.A. Basra, Abdul Wahid, Muhammad Farooq, Wasif Nouman, Hafeez-ur-Rehman and Nazim **Hussain** (2013). Improving Drought Resistance in Wheat (Triticum aestivum) by Exogenous Application of Growth Enhancers. *Int. J. Agric. Biol*, *15*, 1307-1312.
34. Azra Yasmeen, S. M. A. Basra, Muhammad Farooq, Hafeez ur Rehman, Nazim **Hussain**, Habib ur Rehman Athar (2013). Exogenous application of moringa leaf extract modulates the antioxidant enzyme system to improve wheat performance under saline conditions. *Plant Growth Regulation*, *69*(3), 225-233.
35. Asad M., S. Saeed, A. Mahmood, S. A. Malik and N. **Hussain.** (2012). Role of nutrient in management of mango sudden death disease in Punjab, Pakistan. *Pakistan Journal of Zoology*, *44*(3), 675-683.
36. Rehman S.u., N. **Hussain**, M. Tariq, M. **Hussain**, M. Nasir and M. Ayaz (2012). Response of wheat to exogenous boron supply at various growth stages. 2012. *Sarhad J. Agric.*, *28*(3).
37. Zubair,M, C garforth, S, B., **Hussain**, D, M., Zahid, M, S.,Baloch, I,Awan, A.,Ullah, and N, **Hussain.** (2011). Farm forestry in Pakistan: an application of theory of planned behaviour by probing into the measurement issues. *Pak. J. Bot.*, *43*(1), 705-714.
38. Muhammad A. N., I. U. Awan, M. S. Baloch, E. A. Khan, K. Naveed, M. A. Khan,M. Zubair and N. **Hussain.** (2011). Effect of micronutrients on growth and yield of wheat. *Pak. J. Agri. Sci..*, *43*(3), 191-196.
39. Muhammad I.S. Ahmad, T. Muhammad, M. **Hussain**, A. Mehmood, A. jabber. W. Nazir, H. **Hussain and N. Hussain.** (2011). Lowering virus attack with improved yield and fiber quality in different cotton genotypes by early sown cotton (Gossypium hirsutum L.). *African Journal of Biotechnology*, *10*(38), 7367-7371.
40. Sarwar G., M. Baber, N. **Hussain**, I. A. Khan, M. Naeem, M. A. Ullah, A. A. Khan. (2011). Genetic dissection of yield and its components in upland cotton (Gossyypium hirsutum L.). *African Journal of Agricultural*, *6*(11), 2527-2531.
41. Asif, I. F.S. Faisal, k.R. Munawar, A.N. Chrys, P. Gul Bhar and L.H. Nazim. (2011). Trend of mango sudden death syndrome (msds) in relation to fungal microflora and nematodes fauna in Punjab, Pakistan. *Pak. J. Nematol*, *29*(1), 45-51.
42. Asad Masood, S., Saeed., S. F D. Silveria, C. N. Akem, N. **Hussain and M. Farooq.** (2011). Quick decline of Mango in Pakistan: Survey and pathogenicity of fungi isolated from mango tree and bark beetle. *Pak. J. Bot*, *43*(3), 1793-1798.
43. Nazim., H. , M., B. khan, R., Ahmad, M., A., Ali, N., Ahmed and S., Saeed. (2011). Physiochemical traits, productivity and net return of wheat as affected by phosphorus and zinc requirements under arid climates. *Pak. J. Bot*, *42*(3), 1931-1940.
44. Wattoo, J. S., A., S.,Khan, Z. Ali, M. Babar, M. Naeem, M. Aman ullah and N. **Hussain.** (2010). Study of correlation among yield related traits and path coefficient analysis in rice (Oryza sativa L.). *African J. Biotech*, *9*(46), 7853-7856.
45. Babar M., A. F. Mashhadi, A. Mehvish, A. N. Zahra, R.Waheed, A. Hasnain, Sajid-ur-Rahman, N. **Hussain**, M. Ali, I. Khaliq and A. Aziz. (2010). Identification of rust resistancegenes Lr10 and Sr9a in Pakistani wheat germplasm using PCR based molecular markers. *Afr. J. Biotechnol*, *9*(8), 1144-1150.
46. Aasim, M., N., **Hussain**, E., M., Umer, M., Zubair, S., B., **Hussain**, S., Saeed, T., S., Rafique and C.,Sancak. (2010). In vitro shoot regeneration of fenugreek (Trigonella foenum-graecum L.) using different cytokinins. *African Journal of Biotechnology*, *9*(42), 7174-7179.
47. Munir M. P. Hadlay, J. Carew, M. Zubair, S. Adam, S. B. **Hussain**, J. D. Baloch, N. **Hussain**, M. Amanullah. (2010). An appraisal of the use of reciprocal transfer experiment: assisting the stages of photoperiod sensitivity in Antirrhinum majus L. *Pak. J. Bot*, *42*(3), 1931-1940.
48. Shaheen, M., N. Murtaza, A. Qayyum, W. Malik, M. Z. Iqbal,E. Noor, A. Nawaz and N. **Hussain.** (2010). Genetic prospective for the improvement of agronomic traits in Solanum tuberosum L. *Journal of Food, Agriculture & Environment*, *8*(2), 647-650.
49. Akram, M., M.Y. Ashraf, E.A. Waraich, M. **Hussain**, N. **Hussain and A.R. Mallahi** (2010). Performance of autumn planted maize (Zea mays L.) hybrids at various nitrogen levels under salt affected soils. *J. Soil & Environ*, *29*(1), 23-32.
50. Alam, M., N. **Hussain**, M. Zubair, S. B. **Hussain and M. S. Baloch.** (2010). Integration of organic and inorganic sources of phosphorus for on increased productivity of mung bean (VignaRadiata L.). *Pak. J. Agri. Sci.*, *47*(2), 111-114.
51. Khan, A, A., I. Khaliq, M. J. I. Choudhry, A.,Farooq and N., **Hussain** (2008). Status, threats and conservation of the great Indian bustard Ardeotis nigriceps (Vigors) in Pakistan. *Current Science*, *95*(8), 1079-1082.
52. **Hussain**, N., M. A. Khan and R. Ahmad. (2008). Influence of phosphorus application and sowing time on performance of wheat in calcareous soils. *Int. J. Agri. Biol*, *10*, 399-404.
53. **Hussain**, N., M. B.Khan., and R.Ahmad. (2008). Improving wheat productivity in calcareous soils through band placement of farmyard manure with phosphorus. *Int. J. Agri. Biol*, *10*(6), 709-14.
54. **Hussain**, N., M. A. Khan and S.Iqbal. (2005). Effect of Phosphorus levels on Growth and Yield of Different Wheat (Triticum aestivum) Cultivars. *Pak. J. Agric. Sci*, *2*(1), 1-4.
55. Khan, M.A., M. Abid, N., **Hussain and T. Imran.** (2005). Growth analysis of wheat (Triticum aestivum L.) cultivars under saline conditions. *Int. J. Agri. Biol*, *7*(3), 508-510.
56. Khan, M. A., M. Abid, N. **Hussain and M.U. Masood.** (2005). Effect of Phosphorus Levels on growth and Yield of (Zea mays) Cultivars under Saline Conditions. *Int. J. Agri. Biol*, *3*, 511-514.
57. **Hussain**, N., M. A. Khan and R.Farid. (2005). Effect of Varying Levels of Phosphorus and Zinc on Growth and Yield of Wheat (Triticum aestivum). *Indus J. of Plant Sci*, *4*(4), 398-403.
58. Khan, M.A. N., **Hussain and S.Tariq.** (2005). Response of Cotton and Cotton Weeds to Various Levels of Herbicides. *Bio. Sci. Res*, *2*(2), 64-68.
59. Khan, M. B., N. **Hussain**, M. A. Khan, R A. Hameed and Q. Mahmood. (2005). Response of Yield and Yield Components to varying doses of Phosphorous in early sown Wheat (Triticum aestivum). *Sci. Int*, *17*(4), 339-340.
60. **Hussain**, N., M. B. Khan, M. A. Khan and R.A. Hameed. (2005). Screening of Post emergence Weedicides for Weed Control in Cotton (Gossypium hirsutum) and their effect on Yield and Yield components. *Sci. Int*, *17*(3), 241-243.
61. **Hussain**, N. M.A.Khan and M.A.Javed. (2005). Effect of Foliar Application of Plant Micronutrient Mixture on Growth and Yield of Wheat (Triticum aestivum). *Pak. J. Biol. Sci*, *8*(8), 1096-1099.
62. **Hussain**, N., M. B. Khan and R. A. Hameed. (2004). Screening of Pre emergence Weedicides for Weed Control in Cotton (Gossypium hirsutum) and their Effect on Yield and Yield components. *Sci. Int.*, *16*(4), 301-303.
63. Khan, M. A., N. **Hussain**, M. Abid and T. Imran. (2004). Screening of Wheat Cultivars (Triticum aestivum) for Saline Conditions under Irrigated arid Environment. *J. Res. Sci.*, *15*(4), 471-477.
64. **Hussain**, N., N. Haider and N. Ahmad. (2004). Influence of Phosphorus application on Growth and yield Component of Wheat Cultivar Punjab-96. *Indus J. of Plant Sci*, *3*(3), 279-282.
65. **Hussain**, N., A. Yasmin, S. Hanif and T. Javid. (2004). Screening of Different Wheat Genotypes under Natural Saline Condition. *Indus J. of Plant Sci.*, *3*(3), 270-275.
66. Ahmad, N., N. **Hussain**, K.**Hussain**, I. Ahnad, M. Mubashir, R. H. Gillani and M. Akram. (2004). An over view of soil fertility and salinity status of Multan District. *Indus J. of Plant Sci*, *3*(3), 311-316.
67. **Hussain**, N., M. Abid and A. Raza. (2004). Response of wheat (Triticum aestivum) to Phosphorus in the presence of Farm yard manure. *Indus J. of Plant Sci*, *3*(3), 298-302.
68. **Hussain**, N., M. B. Khan, A. Yasmin and M. Aziz. (2004). Response of Cotton cultivars to different planting densities. *The Indus Cotton*, *1*(2), 24-28.
69. Ahmad, A. M. Abid, N. **Hussain**, N. Ahmad and N. Ahmad. (2003). Rock Phosphate solublizing with organic material. *Indus J. of plant Sci.*, *2*(4), 307- 311.
70. **Hussain**, N., M. B. Khan, M. Tariq and S. Hanif. (2003). Spectrum of Activity of Different Herbicides on Growth and yield of Wheat (Triticum aestivum). *Int. J. Agri. Bio*, *2*, 166-168.
71. Khan, M.B., M. Asif, N. **Hussain and M. Aziz.** (2003). Impact of different levels of Phosphorus on Growth and yield of Mungbeen Genotypes. *Asian. J. of Plant Sci.*, *2*(9), 677-679.
72. Khan, M.B., N. **Hussain**, M. Iqbal. (2001). Effect of water stress on growth and yield components of maize variety YHS 202. *Journal of Research (Science)*, *12*(1), 15-18.
73. Asif, M., N. **Hussain and M.B. Khan.** (2001). Effect of K on growth and seed yield of spring sunflower (Helianthus annus L). *Pak. J. Biol. Sci*, *1*, 100-101.
74. Khan, M.B., N. **Hussain and M. Asif.** (2001). Growth and yield of cotton as influenced by various nitrogen levels and plant population. *Int. J. Agri. Biol*, *3*(1), 5-7.
75. Khan, M.B., M. Iqbal, N. **Hussain and M. Asif.** (2000). Impact of mapiquat chloride (pix) on growth and yield of cotton (Gossypium Hirsutum L.). *J. Res. Sci*, *11*(1), 35-37.
76. **Hussain**, N. and M.B. Khan. (2000). Effect of farm yard manure on growth and yield of wheat (Triticum aestivum L.) on saline soil. *J. Res. Sci.*, *11*(2), 31-34.
77. Khan, M.B., M. Asif, N. **Hussain and M. Iqbal.** (2000). Agro-economic impact of different weed control strategies in wheat. *J. Res. Sci*, *11*(1), 46-49.
78. Ahmad, R., N. **Hussain**, T. Mahmood and M. Amjad. (1992). Growth and yield of some sunflower (Helianthus annus L.) hybrids planted in spring season. *Pak., J. Agri. Sci.*, *29*(3), 288-291.

BOOKS

1. **Hussain, N.** (2010). *Phosphorus Nutrition in Wheat: A New Approach*. Lambert Academic Publishing (LAP), Germany. ISBN: ISBN: 978-3-8383-1554-6.

CONFERENCE PAPERS & PROCEEDINGS

1. Azra, Y., S.M. A. Basra, M. Farooq, H. Rehman, N. **Hussain and H. Rehman** (2012). Improving salinity resistance in wheat through exogenous application of natural and aynthetic growth stimulators. In *COMSATS vehari.1st National conf. in Sci. & Res* (pp. 75). COMSATS vehari, Punjab Pakstan.
2. Mubashir, M., S.A. Malik, A.A. Khan, T. M. Ansari, N. **Hussain and N. Ahmad** (2012). Nitrate contamination in drinking water of the Punjab, Pakistan. In *COMSATS vehari.1st National conf. in Sci. & Res* (pp. 41). COMSATS vehari, Punjab, Pakistan. [Oral presentation]
3. Niaz, M., M. Abid, M. A. Ali., N. **Hussain**, M. Yousif and K. Rashid (2012). Impact of residual and cumulative fertilizer boron on cotton-wheat productivity in an irrigated aridisol. In *COMSATS vehari.1st National conf. in Sci. & Res* (pp. 46). COMSATS vehari. [Oral presentation]
4. **Hussain N. S. Saeed and J. S. Dar** (2008). Ultra narrow row and conventional cotton production system in different cotton cultivars. In *International Symposium on Modern Approaches and Techniques in Agriculture to Ensure Food Security in Pakistan* (pp. 78). University of Agriculture, Faislabad, Punjab, Pakistan.
5. Saeed S., N. **Hussain**, M. I. Khan (2007). Invitro Response of inoculated fungus Botryodiplodia theobromae Pat. In different varieties of mango in Pakistan. In *International Symposium on "Prospects of Horticultural Industry in Pakistan"* (pp. 29). University of Agriculture, Faisalabad, Punjab, Pakistan.
6. Saeed S., N. **Hussain**, K. **Hussain**, and M.I. Khan (2006). Role of pruning, worm wash, and vermicompost in mango quick decline management. In *International symposium on sustainable crop improvement and integrated management.* (pp. 68). University of Agriculture, Faisalabad, Pakistan.
7. Mubashir, M. N. Ahmad, N. **Hussain and I. Ahmad** (2006). Survey of nutrient indexing of mango orchards in the southern Punjab, Pakistan. In *6th International & 16th National Chemistry Conference "Quality of Life and Chemical Science* (pp. 187). [Oral presentation]
8. **Hussain**, K., S. Saeed, N. **Hussain and I. Ahmad** (2006). Response of earth worm processed farmyard manure on the growth and yield of tomatoes. In *11th congress of soil science. Soil management for sustainable agriculture and environment.* (pp. 91).
9. **Hussain. K**, S. Saeed, N. **Hussain**, I. Ahmad (2006). Response of earthworm processed farm yard manure on growth and yield of tomato. In *Congress on "Soil management for sustainable agriculture and environment". Soil Science Society of Pakistan. Proc. 11th congress of soil science* (pp. 91). congress of soil science, NARC, Islamabad, Pakistan. [Oral presentation]
10. Abid, M., N. **Hussain and J. Sohail** (2004). Response of Cotton to Zinc Sulphate (ZnSo4) Under Different Tillage Systems. In *4th Int. Sci. Conf* (pp. 11).
11. **Hussain**, N., M. Aziz, MAbid and N. Ahmad (2004). Fibre Quality of Cotton Cultivars at Different Planting Densities. In *4th Int. Sci. Conf* (pp. 11). [Oral presentation]
12. Kazmi, M.R. N. H. Labar and J. Jaskani (2001). Integrated Approach for the control of Dieback complex in Mango. In *3rd National Conf. Of Plant Pathology*. NARC, Islamabad, Pakistan.

OTHER PUBLICATIONS

1. Nawaz H, H Rehman, M M Yousef, Liaqat Ali, N **Hussain**, M Abdullah, R Iqbal, S A Alharb, M J Ansari, Z Kriau?i?nien?, M Ayaz. (2024). Zinc-priming via moringa leaf extract (MLE30) achieved Zn biofortified wheat grains and drought tolerance by efficient anti-oxidant status. *Plant Stress*, 12.
2. Nawaz H, H Rehman, MZ Ihsan, MS Rizwan, N **Hussain**, B Ali, R Iqbal, MU Hasnain, MS Elshikh, J Alkahtani & M Arslan. (2024). Organic seed priming with curtailed seed rate compensated wheat grains productivity by upgrading anti-oxidant status against terminal drought at flowering and milkin. *Scientific Reports*, *14*(1), 4941.
3. Nawaz H., Nazim H., Moazzam J., Azra Y., Asad B., Muhammad A., Muhammad U. (2020). Seed bio-priming mitigates terminal drought stress at reproductive stage of maize by enhancing gas exchange attributes and nutrients uptake. *Turk. J. Agric*, *44*, 250-261.

RESEARCH GRANTS & FUNDED PROJECTS

Development of integrated crop management practices to increase sustainable yield and quality of mangoes in Pakistan and Australia 2006 – 2010
ACIAR Australia
Team member · 1,025,100 · Completed

Evaluation of heat tolerance in different cotton genotypes by pollen viability under different temperatures. 2005
Bahauddin Zakariya University, Multan
Principal Investigator (PI) · PKR 98,000 · Completed

Etiology and management of sudden death phenomenon in mango. 2004
Pakistan Agriculture Research Council
Team member · PKR 3,200,000 · Completed

Development of Package of production Technology of Canola* 2002
Bahauddin Zakariya University, Multan
Co-Principal Investigator · PKR 200,000 · Completed

Integrated Pest Management of Aphids on Canola 2002
Pakistan Agriculture Research Council
Co-Principal Investigator · PKR 2,000,000 · Completed

Ultra Narrow Row UNR Cotton Production in Multan 2002
Bahauddin Zakariya University, Multan
Principal Investigator (PI) · PKR 38,000 · Completed

National Coordinated Research Project on Mango Crisis 1995
Pakistan Agriculture Research Council
Principal Investigator (PI) · PKR 788,000 · Completed

Technology Development Fund MLE30: A miracle Bio stimulant 2019
Higher Education Commission (HEC), NRPU
Co-Principal Investigator · PKR 13,850,000 · Completed

Introducing SSI (Sustainable sugarcane initiative) technology for enhanced can production and economic returns in real farming situations under southern Punjab climatic condition of Pakistan 2019
Higher Education Commission (HEC), NRPU
Co-Principal Investigator · PKR 6,310,000 · Completed

Response of Wheat to Phosphorus in Calcareous Soils 2002
Higher Education Commission (HEC), Other
Principal Investigator (PI) · PKR 154,000 · Completed

CONSULTANCIES

Agriculture Expert 1994 – Present
Radio Pakistan Multan
Lead consultant · Ongoing

- Advisory Service to Farming Community in Local Language.

RESEARCH SUPERVISION

PhD: 8 completed

Javaiz Alam (PhD) – *Enhancing wheat production through advance planting techniques and organic seed priming with curtailed seed rate under drought stress* 2024
Supervisor · Completed

Hafiz Muhammad Usman (PhD) – *Impact of pre and post-harvest approaches on the quality of cotton seed* 2024
Supervisor · Completed

Muhammad Yousaf (PhD) – *Evaluation of antioxidant status and enhancement strategies for drought tolerance in chickpea under agro-ecological conditions of southern Punjab* 2021
Supervisor · Completed

Muhammad Ahsan Azfal (PhD) – *Exploration and modulation of abiotic stress tolerance in cotton (Gossypisum hirsutum L.) genotypes* 2021
Supervisor · Completed

Muhammad Bilal (PhD) – *Evaluation of various sulphur application strategies to enhance its use efficiency in cotton (Gossypium hirsutum L.)* 2021
Supervisor · Completed

Sagheer Ahmad (PhD) – *Studies on the response of potassium and boron fertilizers to transgenic cotton (Gossypium hirsutum L.) under semi-arid environments in Multan, Punjab, Pakistan* 2019
Supervisor · Completed

Muhammad Arif (PhD) – *Growth, yield and quality response of cotton as influenced by growth regulators, planting geometry and fertilizer application under agro-climatic conditions of Multan* 2018
Supervisor · Completed

Hamid Nawaz (PhD) – *Improvement in growth, yield and antioxidant status of wheat with exogenous application of growth enhancers under drought stress conditions* 2016
Supervisor · Completed

HONOURS & AWARDS

Lifetime Achievement Award, Government of Pakistan (National) 2022
For Radio Pakistan, Best Compare in Agriculture Category.

CONFERENCES & EVENTS ORGANISED

Dunya Kissan Mela Mar 2019
Other, National, Bahauddin Zakariya University
Organizer · Sponsored by Dunya News

PROFESSIONAL MEMBERSHIPS

Member of NAEAC as Agronomy Expert, Agronomy Expert 2016 – Present

Society of Facilitators and Trainers, Facilitator and Trainer 2015 – Present

Member of Botanical Society of Pakistan, Expert 2002 – Present

Agronomy Society of Pakistan, Agronomy Expert 2002 – Present