

Dr. Shakeel Imran

Associate Professor, Department of Agronomy, University of Agriculture, Faisalabad, (Sub-Campus/Constituent College, Burewala-Vehari), Pakistan (March 2025 – to date)

Assistant Professor (March 2016 – March 2025)

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Personal Details

Date of Birth: February 02, 1984

Domicile: Faisalabad

Nationality, ID & Passport #: Pakistani, 33106-3865218-9, DQ1222183

Home/Postal Address: P# 737-738, Block-C, Millat Town, Faisalabad, Pakistan

Institutional Address: 7-KM Chichawatni Road, UAF Sub-Campus, Burewala, Pakistan

Education

PhD (Agronomy) 2014. Split-Site Degree from Department of Agronomy, University of Agriculture, Faisalabad, **Pakistan** and Division of Crop Sciences, School of Bio-Sciences, University of Nottingham, **United Kingdom**

Thesis Title: Response of maize to seed priming and foliar application with various combinations of growth promoting substances

Split-Site Research Project: Phenotypic analysis of mutants of downstream targets of the N-end rule pathway during seed germination of *Arabidopsis thaliana*

M.Sc. (Hons.) Agri. (Agronomy) 2009. “Response of Chickpea (*Cicer arietinum*) and *Euphorbia dracunculoides* to pre and post emergence herbicides under controlled conditions” Department of Agronomy, University of Agriculture, Faisalabad

B.Sc. (Hons.) Agri. (Agronomy) 2007. Department of Agronomy, University of Agriculture, Faisalabad, Pakistan

Academic Distinctions/Awards

Commonwealth PhD Split-Site Fellowship, U.K., 2011 - 2012.

HEC- Pakistan Fellowship for M.Sc. (Hons) leading to PhD, 2008 - 2013.

Benevolent Fund Merit Scholarship for BSc (Hons), 2004 - 2007.

Research Interests

1. Seed physiology and technology (special interest in seed drying & storage, germination, dormancy, longevity; and priming of field crop seeds under normal and stressful conditions.
2. Plant growth regulation (exploiting natural sources/plant extracts for plant growth regulation and pest management.
3. Induction of stress tolerance in crop plants (cotton, cereals, legumes & oilseeds) in relation to environmental stresses
4. Technology transfer and empowering agricultural communities

Courses Taught

Postgraduate

AGR-709 Seed Technology 3(2-1)

AGR-717 Sustainable Agriculture 3(3-0)

C.Phy-705 Postharvest Physiology 3(3-0)

Undergraduate

AGR-406 Introduction to Seed Science 2(2-0)

AGR-502 Seed Science Technology 3(2-1)

AGR-505 Field Crop Physiology 3(2-1)

AGR-607 Environmental Physiology and Crop Improvement 4(2-2)

AGR-302 Principles of Agronomy 3(2-1)

C.Phy-301 General Crop Physiology 2(1-1)

Selected Publications

1. Raza, T., M. F. Qadir, **S. Imran**, Z. Khatoon, M. Y. Khan, M. Mechri, W. Asghar, M. I. A. Rehmani, S. S. Villalobos, T. Mumtaz, R. Iqbal. **2025**. Bioherbicides: Revolutionizing weed management for sustainable agriculture in the era of One-health, **Current Research in Microbial Sciences**. doi: <https://doi.org/10.1016/j.crmicr.2025.100394>
2. Guzzon F, Costich DE, Afzal I, Barboza Barquero L, Monge Vargas AA, Vargas Ramírez E, Bello P, Dahal P, Sánchez Cano C, Zavala Espinosa C, **Imran S**, Patolo S, Tukia TN, Van Asbrouck J, Nabubuniyaka-Young E, Gianella M, Bradford K.J. **2024**. Applications of dry chain technology to maintain high seed viability in tropical climates. **PeerJ**. <http://doi.org/10.7717/peerj.18146>
3. Nawaz, R., Z.U. Babar, I. Saba, A. A. Shah, T. Abbas, H. O. Elansary, S. Sridhara and **S. Imran**. **2024**. Morpho-physiological and biochemical characterization of Kinnow (*Citrus reticulata*) in response to canker pathogens (*Xanthomonas axonopodis* pv. citri). **Scientific Reports**. <https://doi.org/10.1038/s41598-024-68257-2>
4. Saleem, K., M. A. Asghar, A. Raza, K. Pan, A. Ullah, H. H. Javed, M. F. Seleiman, **Imran S.**, S. M. Nadeem, K. S. Khan, J. Du, F. Xu, G. Kocsy, K. H. M. Siddique, A. Riaz. **2023**. Alleviating drought stress in Strawberry plants: Unraveling the role of Paclobutrazol as a growth regulator and reducer of oxidative stress induced by reactive oxygen and carbonyl species. **Journal of Plant Growth Regulation**. <https://doi.org/10.1007/s00344-023-11120-x>
5. Saleem K., M. A. Asghar, H. H. Javed, Ali R, Mahmoud F. S., Abd Ullah, Altaf R., Sufyan I, Aamir H., **Imran S.**, Sajid M. N., Junbo D, Kocsy G., Aamir R. and Jean W. H.Y. **2023**. Alleviation of arsenic toxicity-induced oxidative stress in lemon grass by methyl jasmonate. **South African Journal of Botany**. 160:547-559. <https://doi.org/10.1016/j.sajb.2023.07.034>
6. Raza, T., Mazahir A., Amna, **Imran S.**, Muhammad Y. K., Ansa R., Zeinab R., and Neal S. **2023**. EashlImpact of Silicon on Plant Nutrition and Significance of Silicon Mobilizing Bacteria in Agronomic Practices. **Silicon**. <https://doi.org/10.1007/s12633-023-02302-z>
7. Ma, H., Tecimen, H.B., Ma, F., **Imran, S.**, Gao, R., Yin, Y., Raza, T. and Sun, J., **2022**. Different responses of soil nitrogen to combined addition of labile carbon sources with

- fresh versus decomposed litter. **Journal of Plant Nutrition and Soil Science.**, 185, 232-242. <https://doi.org/10.1002/jpln.202100303>
8. Ahmad, S., Raza, T., **Imran, S.**, Eash, N.S., Khan, N., Ashiq, W. and Flynn, T., **2021**. Foliar Application of Boron Improves the Growth and Yield in Barley (*Hordeum Vulgare* L.). **Bulletin of University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca: Food Science and Technology**, 78(02): 11-17.
 9. Ma, H., **Imran, S.**, Gao, R., Yin, Y. and Raza, T., **2021**. Contrasting effects of alanine and methionine on nitrogen ammonification and nitrification, and nitrous oxide emissions in subtropical forest soil. **Journal of Soil Science and Plant Nutrition**, 21(4), pp.2967-2979. <https://doi.org/10.1007/s42729-021-00582-1>
 10. Khan, N.A., Ahmad, S., Libin, W., **Imran, S.**, Shah, A.A., Aslam A.R., Raza, Q.A., Akhtar, M.S., Latif, H.Z. and Mumtaz, A. **2021**. Analyzing poverty reduction and community development programs of Pakistan: outcomes, challenges and lessons learned. **International Journal of Agricultural Extension**, 09 (03): 507-523.
 11. Raza, T., Khan, M.Y., Nadeem, S.M., **Imran, S.**, Qureshi, K.N., Mushtaq, M.N., Sohaib, M., Schmalenberger, A. and Eash, N.S., **2021**. Biological management of selected weeds of wheat through co-application of allelopathic rhizobacteria and sorghum extract. **Biological Control**, 164, p.104775. <https://doi.org/10.1016/j.biocontrol.2021.104775>
 12. Ahmad, S., Akhtar, S., Bhatti, S., **Imran, S.**, Akhtar, M.S., Mustafa, G., Aslam, A.R., Liu, C., Noreen, S. and Khan, M.A., **2021**. Assessment of the impact of climate change on the productivity of cotton: empirical evidence from cotton zone, southern Punjab, Pakistan. **International Journal of Agricultural Extension**, 9(2), pp.143-162.
 13. Ma, H., Tecimen, H.B., Pei, G., **Imran, S.**, Gao, R. and Yin, Y., **2021**. Effects of co-addition of ammonium, nitrite, and glucose with methionine on soil nitrogen. **Environmental Monitoring and Assessment**, 193(6), pp.1-12. <https://doi.org/10.1007/s10661-021-09109-8>
 14. Akhtar, S., Ahmad, S., Huifang, W., **Imran, S.**, Wang, C., Hassan, G., Tabasam, N. and Mahmood, K., **2021**. Assessment of women's economic empowerment in the rice cultivation sector of the upper Punjab region, Pakistan. **International Journal of Agricultural Extension**, 9(1), pp.35-55.
 15. Raza, T., Qureshi, K.N., **Imran, S.**, Eash, N.S. and Bortone, I., **2021**. Associated health risks from heavy metal-laden effluent into point drainage channels in Faisalabad, Pakistan. **Pakistan Journal of Agricultural Research**, 34(3), p.487.
 16. Muhammad, A.A., Jiang, H.K., Shui, Z.W., Cao, X.Y., Huang, X.Y., **Imran, S.**, Ahmad, B., Zhang, H., Yang, Y.N., Shang, J. and Hui, Y., **2021**. Interactive effect of shade and PEG-induced osmotic stress on physiological responses of soybean seedlings. **Journal of Integrative Agriculture**, 20(9), pp.2382-2394. [DOI:10.1016/S2095-3119\(20\)63383-4](https://doi.org/10.1016/S2095-3119(20)63383-4)
 17. Ahmad, S., Huifang, W., Akhtar, S., **Imran, S.**, Yousaf, H., Wang, C. and Akhtar, M.S., **2021**. Impact assessment of better management practices of cotton: a sociological study of southern Punjab, Pakistan. **Pakistan Journal of Agricultural Sciences**, 58(1): 291-300.
 18. Ahmed, S., Huifang, W., Akhtar, S., **Imran, S.**, Hassan, G. and Wang, C., **2021**. An analysis of urban sprawl in Pakistan: consequences, challenges, and the way forward. **International Journal of Agricultural Extension**, 8(3): 257-278.

19. Ma, H., Mao, P., **Imran, S.**, Raza, T., Gao, R. and Lin, Y., **2021**. Rice planting increases biological nitrogen fixation in acidic soil and the influence of light and flood layer thickness. **Journal of Soil Science and Plant Nutrition**, 21(1), pp.341-348. <https://doi.org/10.1007/s42729-020-00364-1>
20. Ahmad, S., Huifang, W., Akhtar, S., Maqsood, S. and **Imran, S.**, **2020**. An analytical study of child labour in the agriculture sector of the rural areas of central Punjab, Pakistan. **Sri Lanka Journal of Social Sciences**, 43(1): 21-37 DOI: <https://dx.doi.org/10.4038/sljss.v43i1.7730>
21. Afzal, I., **Imran, S.**, Javed, T. and Basra, S.M.A., **2020**. Evaluating the integrative response of moringa leaf extract with synthetic growth promoting substances in maize under early spring conditions. **South African Journal of Botany**, 132, pp.378-387. <https://doi.org/10.1016/j.sajb.2020.04.025>
22. Chen, C., Qiu, H., Ma, H., **Imran, S.**, Raza, T., Gao, R. and Yin, Y., **2020**. Response of the subtropical forest soil N transformations to tannin acid-organic nitrogen complexes. **SN Applied Sciences**, 2(7), pp.1-10. <https://doi.org/10.1007/s42452-020-3006-7>
23. Raza, T., Kazmi, Z.H., Ullah, M.A., Kanwal, I., **Imran, S.**, Ahmad, R. and Ullah, I.H. **2020**. Comparative Effectiveness of Different Growth Media on Growth, Biomass and Morphology Features of Kinnow Mandarin Seedling. **Food Processing & Nutritional Science**. 1: 1-7.
24. Asghar, M.A., Du, J., Jiang, H., Li, Y., Sun, X., Shang, J., Liu, J., Liu, W., **Imran, S.**, Iqbal, N. and Ahmad, B., **2020**. Shade pretreatment enhanced drought resistance of soybean. **Environmental and Experimental Botany**. doi.org/10.1016/j.envexpbot.2019.103952
25. Asghar, M.A., Li, Y., Jiang, H., Sun, X., Ahmad, B., **Imran, S.**, Yu, L., Liu, C., Yang, W. and Du, J., **2019**. Crosstalk between abscisic acid and auxin under osmotic stress. **Agronomy Journal**, 111(5), pp.2157-2162. [doi:10.2134/agronj2018.10.0633](https://doi.org/10.2134/agronj2018.10.0633)
26. Akhtar, S., Ahmad, S., Huifang, W., Shahbaz, A., Ghafoor, A., **Imran, S.** and Zafar, A., **2018**. An analysis of wastewater irrigation practices and its impacts on the livelihood generation and food chain contamination in Faisalabad District, Pakistan. **ISABB Journal of Health and Environmental Sciences**, 5(4), pp.33-42.
27. Akhtar, S., Ramzan, S., Ahmad, S., Huifang, W., **Imran, S.** and Yousaf, H., **2018**. Women in Agriculture–Lack of Access to Resources (An Analytical Study of District Faisalabad, Punjab, Pakistan). **SSRG International Journal of Economics Management Studies**, 5(10), pp.16-24.
28. Qasim, M., Ahmad, S., Akhtar, S., **Imran, S.** and Qureshi, K.N., **2018**. Urban Population Behaviour and Knowledge Assessment about Water Quality, Consumption, and Conservation in Pakistan. **Environment and Ecology Research**, 6(6): 525-536 DOI: [10.13189/eer.2018.060602](https://doi.org/10.13189/eer.2018.060602)
29. Ahmad, S., Huifang, W., Akhtar S., Bukhari, Z., **Imran, S.**, and Yousaf, H., **2018**. Investigation of awareness and practices among the youth about HIV/aids in central Punjab (Pakistan). **Saudi Journal of Humanities and Social Sciences**, 3(10):1162-1168 DOI: [10.21276/sjhss.2018.3.10.3](https://doi.org/10.21276/sjhss.2018.3.10.3)
30. Akram A., G. Akhtar, I. Ahmad, R. M. Balal, M. A. Shahid, A. Younis and **S. Imran**. (2015). Efficacy of planting seasons and macro nutritional levels on growth, yield and vase life of Carnation *Dianthus caryophyllus* L. **Science, Technology and**

Development. 34(3): 169-178

31. **Imran, S.,** I. Afzal, M. Amjad, A. Akram, K.M. Khawar and S. Pretorius. (2014). Seed priming with aqueous plant extracts improved seed germination and seedling growth under chilling stress in Lentil (*Lens culinaris* Medik). **Acta Adv. Agri. Sci.** 02 (11): 58-69.
32. M. Amjad, J. Akhtar, M. Anwar-ul-haq, **S. Imran** and S.E. Jacobsen. (2014). Soil and foliar application of potassium enhances fruit yield and quality of tomato under salinity. **Turk. J. Biol.,** 38 (2): 208-218.
33. **Imran, S.,** I. Afzal, S.M.A. Basra and M. Saqib. (2013). Integrated seed priming with growth promoting substances enhances germination and seedling vigour of spring maize at low temperature. **Int. J. Agric. Biol.,** 15 (6): 1251–1257.
34. Tanveer A., **S. Imran,** M. Ayub and M. Yasin. (2010). Response of chickpea (*Cicer arietinum*) and *Euphorbia dracunculoides* to pre and post-emergence herbicides. **Pak. J. Weed Sci. Res.,** 16 (3): 267-277.

Professional Short Training Courses taken at University of Nottingham, UK (Total= 29)**-Academic Language & Writing Skills**

Writing in Plain English	19 April 2012
Research Writing	14 February 2012

-Research Methods & Approaches

Problem exploration in research	27 March 2012
Further qualitative research	22 March 2012
Essential information skills for new researchers	08 February 2012

-Research Environment & Context

Finishing your thesis	24 April 2012
Getting going on your thesis	20 March 2012
Preparing for the viva	03 March 2012

-IT & Information Skills

Microsoft PowerPoint: Introduction	08 May 2012
Creating a Poster in PowerPoint	27 April 2012
Microsoft Outlook: Collaborative Features	18 April 2012
NVivo® Part 2: Using NVivo9® in the analysis of qualitative data.	21 March 2012
Creating and Managing Long Documents in Microsoft Word	23 March 2012
Referencing and citing using Endnote	08 March 2012
Collaborating in Microsoft Word	26 January 2012
Simple calculations in Excel	20 December 2011

-Interpersonal & Communication Skills

Effective Academic Presentation	21 February 2012
Presentation skills for researchers	17 April 2012

-Learning & Teaching

Making Connections: Brain - Friendly Teaching	28 February 2012
Teaching Students from Different Cultures	25 January 2012
Engage, Excite, Enhance: Top tips for Teaching and Learning!	23 February 2012
Marking and Assessment for Scientists	07 March 2012

-Career Management

Applying for a Fellowship	11 January 2012
Applying for academic jobs	30 January 2012
Interview Training Practical for Researchers	13 March 2012
Thinking Ahead - Career options and planning	05 April 2012
Career action planning	15 December 2011
Applying for jobs outside academia	10 February 2012

-Leadership & Management

Self-Confidence Building	05 January 2012
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