

Asim Mehmood

Mailing Address: House 330, Street 6 AECHS, Rawalpindi, Pakistan

Cell: (+92) 324-5255594

Email: asimmehmood520@gmail.com



Professional Summary

Having a professional attitude and intend to have responsibilities and targets, in an environment rich in research and practical field experience. I am seeking an entry-level position to begin my career in a high-level professional environment. I would love to work with an institute offering the opportunity to excel in professional talent based on my talent and experience. My professional journey has equipped me with a robust foundation in plant pathology, complemented by hands-on expertise in both field and lab work. Notable professional achievements include:

1. Research Fellow (October 2024 to Present) at the op Disease Research Institute, National Agriculture Research Centre, Islamabad under the Public Sector Development Project (PSDP) "Productivity Enhancement of Wheat" CDRI-Murree Component "Strengthening of CDRI Murree Wheat Rust Research Facility".
2. Research Associate (July 2020 to October 2024) at the Crop Disease Research Institute, National Agriculture Research Centre, Islamabad under the Public Sector Development Project (PSDP) "Productivity Enhancement of Wheat".

Professional Experience

National Agriculture Research Centre- Crop Disease Research Institute, Pakistan

Research Fellow, October-2024 to Present

- Virulence/race analysis of the leaf, stem and yellow rust disease samples.
- Screening of the genetic materials.
- Maintenance of inoculum culture collection and genetic stock.

National Agriculture Research Centre- Crop Disease Research Institute, Pakistan

Research Associate, July-2020 to October-2024

- Screening of wheat for resistance against yellow rust, karnal bunt, spot blotch, powdery mildew, and other seed borne diseases. I am responsible for the surveillance, monitoring, and evaluation of wheat diseases, with a focus on rusts (stripe, leaf, and stem).
- Phenotypic data collection and report writing on rust resistance for the National Uniform Yield Trial (NUYT), National Wheat Disease Screening Nursery (NWDSN), Historical Wheat Varieties (CWV), Trap Nurseries, and Australian Centre for International Agriculture and Research (ACIAR-mapping population and double haploids lines).
- I conduct visual observation and filter wash tests on karnal bunt samples received from CIMMYT and samples collected during wheat surveys across different agro-ecological zones of Pakistan to assess its current status.
- Additionally, I perform DNA extraction of rust isolates for short/long read sequencing, PCR, Marker assisted selection (MAS), rtPCR, and other molecular techniques.
- My work also includes the isolation and pathogenicity of *F. graminearum* (Wheat Scab) spot blotch, and *T.indica* (Karnal Bunt) on wheat plants, along with the testing, isolation, and characterization of various crops, vegetable, flowers, and fruit samples.

Internship (Federal seed certification and registration department, Islamabad (July 2017-Sep 2017) Ministry of National Food Security and Research

- Conducting seed health testing and purity analysis for wheat, rice, and cotton is a key aspect of my work and responsible for sampling and testing seeds to ensure they meet quality standards, and managing seed quality control process.

Education

Master of Science (Honors): 2017 –2019 Pir Mehr Ali Shah University of Arid Agriculture Rawalpindi

Major Courses: Agriculture (Plant Pathology)

CGPA: 3.87/4.00

Bachelor of Science (Honors): 2013 – 2017 Pir Mehr Ali Shah University of Arid Agriculture Rawalpindi

Major Courses: Agriculture (Plant Pathology)

CGPA: 3.52/4.0

Publications

- Powdery mildew of mango: current status, perspective and emerging tools for management. **Agricultural Sciences Journal**. Iqbal, S., Atiq, M., Fayyaz, M., Zakria, M., Rajput, N. A., Kachelo, G. A., & **Mehmood, A.** (2024).
- Comprehensive assessment of quality parameters in oyster mushrooms (*pleurotus* spp) under various substrates and environmental conditions. **Pakistan Journal of Phytopathology**. Hassan, M.U., Ullah, S., **Mehmood, A.**, A., Amin, & Shahzad, M.U. 92023).
- A comprehensive review of significant bacterial diseases affecting wheat. **Pakistan Journal of Phytopathology**. **Mehmood, A.**, Fahad, A., Amin, A., Ullah, S., Fayyaz, M., & Fateh, F. S. (2023).
- Sheath Blight of Rice: A review of host pathogen interaction, management strategies and future prospects. **Plant Protection**. Ali, W., Fahad, A., **Mehmood, A.**, Amin, A., Ullah, S., Sohail Fateh, F., & Fayyaz, M. (2023).
- Occurrence and prevalence of mango decline in the Punjab province of Pakistan. **Plant Protection**. Fateh, F. S., Mukhtar, T., **Mehmood, A.**, Ullah, S., & Kazmi, M. R. (2022).

Conferences and Seminars

- 2nd CHINA-PAKISTAN joint wheat molecular breeding conference at the Department of Plant Sciences Quaid-I-Azam University, Islamabad (06 March, 2024).
- Race analysis of stripe rust (*Puccinia striiformis* f. sp. *tritici*) from 2022-23 wheat cropping season. 8th International Conference of Pakistan Phytopathological Society (26-28/11/2023).
- Monitoring karnal bunt, a biosecurity risk, in Punjab and KPK: techniques for detection and identification of *Tilletia indica*. 8th International Conference of Pakistan Phytopathological Society (26-28/11/2023).
- Surveillance, monitoring and evaluations of the wheat against rust and other foliar and seed borne diseases in Pakistan. 8th International Conference of Pakistan Phytopathological Society (26-28/11/2023).
- Whole genome sequencing and comparative genome analysis of major *Puccinia striiformis* f. sp. *tritici* pathotypes prevalent in Pakistan. 8th International Conference of Pakistan Phytopathological Society
- Genome biology and evolution of mating type loci in stripe rust isolates from Pakistan. 8th International Conference of Pakistan Phytopathological Society (26-28/11/2023).
- A two-day international conference on recent advances for crop productivity enhancement at Pir Mehr Ali shah Arid Agriculture University (3-4 April, 2019).
- Three days international conference on “Tackling climate change through plant breeding” (13 November, 2017).

Certificates

(16/04/2024 – 04/05/2024)

- Water Management (**CABI Acadmey**)

(01/04/2024 – 15/04/2024)

- Sustainable Soil Management Practices (**CABI Acadmey**)

(01/08/2023 – 30/09/2023)

- Introduction to Bio protection Products (**CABI Acadmey**)

(01/03/2023 – 30/04/2023)

- Crop Pest Management Program (**CABI Acadmey**)

(14/12/2022 – 15/12/2022)

- Microbial NGS Data Analysis and Machine Learning (Next Generation Sequencing)

(01/04/2017 – 30/06/2017)

- Certificate in Computer Applications (**Govt. Institute of Information Technology**)
(MS Word, PowerPoint, Excel)

(01/08/2023 – 30/09/2023)

- Understanding Plants- part I: What a Plant Knows (Coursera) (**Tel Aviv University**)

(01/08/2023 – 30/09/2023)

- Understanding Plants- part II: Fundamentals of Plant Biology (Coursera) (**Tel Aviv University**)

(08/06/2023 – 27/08/2023)

- Data Analysis with R Programming (Coursera) (**Google**)

(09/05/2023 – 26/06/2023)

- Sustainable Agriculture and Land Management (Coursera) (**University of Florida**)

(03/03/2023 – 26/05/2023)

- Bioinformatics: Introduction and Methods (Coursera) (**Peking University**)

Project (Surveillance of Die Back on Loquat (13/01/2017 --- 16/04/2017)

In my final year project for my B.Sc. (Hons.) in Agriculture, I focused on the study of dieback disease in loquat. Through this project, I gained hands-on experience with fundamental plant pathology techniques, including isolation, culture purification, sub-culturing, and culture preservation. This experience significantly enhanced my research skills and deepened my understanding of plant disease management.

Workshop & Webinar

- Comparative wheat phosphoproteome profiling pinpoints high temperature-associated breeding markers. International Wheat Genome Sequencing Consortium (17 October, 2024).
- Knowledge is not enough: Social and behaviour change communication for pesticide risk reduction. CABI Plantwise Plus (16 October, 2024).
- Identification, characterization and combination of novel resistance genes against rust in wheat. Swedish University of Agricultural Sciences (29 August, 2024).
- 2021 BGRI Technical Workshop: Global Resilience: Science, Pandemics, and the Future of Wheat Confirmation (6_8 October, 2021).

Honors & Awards

- I won a “PEEF (Punjab Educational Endowment Fund) Scholarship” for the completion of my Master’s degree (2017-2019).
- Prime Minister Laptop Scheme. The laptop was awarded by the government of Pakistan for achieving excellence during bachelor's degree (2017-2019).

Additional Skills

- **Soft Skills:** Communication, Leadership, Teamwork, Problem Solving and Self-Learning
- **Hard Skills:** MS Word, Power Point, Excel, Google Drive, Statistic Software's
- **Interests:** Social activities, Scientific Writing, Cricket
- **Language:** English, Urdu, Punjabi

References

- **Dr. Tariq Mukhtar | Professor**

Dr. Tariq taught many classes of Plant Pathology particularly Plant Nematology subject. I have interacted with him for almost 4 years and he knows me very well.

E-mail: drtmukhtar@uaar.edu.pk | Phone number: (+92) 301 7194205

- **Dr. Muhammad Fayyaz | Principal Scientific Officer**

I have been collaborating with Dr. Fayyaz for nearly four years in the capacity of a research associate within the PSDP Project of Wheat at the Crop Diseases Research Institute, NARC, where he serves as the Principal Scientific Officer.

E-mail: sofayyaz@yahoo.com | Phone number: (+92) 346 7894813

- **Dr. Faisal Sohail Fateh | Principal Scientific Officer**

I have been part of Dr. Faisal's team at the Fungal Lab in NARC for nearly four years, where he holds the position of Lab Incharge. Throughout this period, I have been actively involved in research on various fungal pathogens under his guidance.

E-mail: faisalmynname@gmail.com | Phone number: (+92) 307 8293910