Tamsal Murtza (PhD)

Email: tamsal.murtaza@uaf.edu.pk

Education

- PhD - School of Agriculture and Environment, University of Western Australia, Australia (Dec 2016 –Apr 2022)
- MSc (Hons) Plant Pathology -Department of Plant Pathology - University of Agriculture, Faisalabad, Pakistan (September 2011 – July 2013)
- BSc (Hons) Agricultural Sciences- (Major: Plant Pathology)- Department of Plant Pathology- University of Agriculture, Faisalabad, Pakistan (September 2007 – July 2011)

Terminal Qualification Details (PhD)

- PhD - School of Agriculture and Environment, University of Western Australia, Australia (6-Dec 2016 – 22 Apr 2022)
- **Research Summary:** Despite widespread recognition of white leaf spot (*Neopseudocercosporella capsellae*) as a re-emerging threat in Brassica crops globally, little attention has been given to the evolutionary dynamics and growth stage–specific disease susceptibility, climatic variables that shape epidemics in herbicide-tolerant canola systems. I chose to focus my PhD research on this critical gap by evaluating geographic and temporal patterns of pathogen virulence and genetic diversity. Furthermore, host growth stage effects, impact of climatic variables on disease incidence and severity through extensive field and laboratory experiments has been done. My research on pathogen–pathogen interactions in rapeseed demonstrated that the sequence of dual inoculations markedly influences disease outcomes: some combinations elicited synergistic effects, while others produced antagonistic suppression, depending on cultivar resistance profile.

Post-Qualification experience (post-PhD)

Assistant Professor, Department of Plant Pathology, University of Agriculture, Faisalabad, Pakistan (12 May 2022– Present)

Research Publications

- Murtza, T., You, M. P., & Barbetti, M. J. (2019). Geographic location and year determine virulence, and year determines genetic change, in populations of *Neopseudocercosporella capsellae*. Plant Pathology, 68(9), 1706–1718.
- Murtza, T., Pei You, M., and Barbetti, M. J. (2021).Temperature and relative humidity shape white leaf spot (*Neopseudocercosporella capsellae*) epidemic development in rapeseed (Brassica napus). Plant Pathology. 70(8), 1936-1944.
- Murtza, T., Pei You, M., and Barbetti, M. J. (2021). Canola growth stage at time of infection determines magnitude of white leaf spot (*Neopseudocercosporella capsellae*) impact. Plant Disease. 105(5), 1515-1521.
- Murtza, T., Pei You, M., and Barbetti, M. J. (2022). Synergistic/antagonistic interactions between Neopseudocercosporella, Alternaria, Leptosphaeria, and Hyaloperonospora determine aggregate foliar disease severity in rapeseed. Plant Pathology. 71(3), 523-534.
- Murtza, T., Pei You, M., and Barbetti, M. J. (2022). Application timing of herbicides, glyphosate and atrazine, sway respective epidemics of foliar pathogens in herbicide-tolerant rapeseed. Plant pathology. 71(3), 507-522.

- Murtaza, T., Javed, N., Kamran, M., Khan, S. A., Abbas, H., Iqbal, Z., Iqbal, M. A., & Shahbaz, M. U. (2016). Determination of damage potential of Meloidogyne incognita on different vegetable crops and its management with cadusafos. Journal of Agricultural Research, 54(4), 719–726.
- Mehmood, S., Sajid, M., Murtaza, T., Hussain, T., Rehman, R. N. U., Akram, M. T., Abbas, H., Rafiq, K., Kamran, M., Hussain, M., Haq, M. I., & Khan, G.-e.-l. (2025). Disease resistance to tomato yellow leaf curl virus (TYLCV) enhanced by natural plant growth regulators and biopesticide. Journal of Plant Diseases and Protection, 132, 53.
- Sarfraz, M., Saifuddin, T., Rasham, T., Murtza, T., & Tahir, S. (2024, December 31). Pseudomonas aeruginosa: Navigating the complex landscape of antimicrobial resistance. Biological Times, 3(12), 34–35.
- Sarfraz, M., Hyder, N., Ishtiyaq, K., Murtza, T., Akbar, M. J. & Tahir, S., 2024. Methicillin-resistant Staphylococcus aureus: Pioneering solutions in the fight against antimicrobial resistance. Biological Times, 3(12), pp.32–33.
- Murtza, T., & Saman, M. (2024, December 17). Bridging resource gaps in rural Pakistan. The Agricultural Economist. https://agrieconomist.com/bridging-resource-gaps-in-rural-pakistan

Research Supervision and outreach (Trainings, Conferences and Workshops)

- Supervised three postgrad students in designing and conducting real-time experiments to fulfill the requirement of their thesis for graduation. Five postgrad students under my supervision have completed and submitted their thesis for the fulfilment of MSc. (hons.) Plant Pathology degree.
- Murtza, T., You, M. P., & Barbetti, M. J. (2021). Understanding white leaf spot (Pseudocercosporella capsellae) epidemics on canola. In 20th Australian Research Assembly on Brassicas (pp. 124–126), Perth, WA: Australian Oilseeds Federation Inc.
- Murtza, T. (2018, July). Understanding pathogen and environmental drivers of white leaf spot (Pseudocercosporella capsellae) epidemics and their impacts on canola [Poster presentation]. 11th International Congress of Plant Pathology (ICPP2018), Boston, USA.
- Selected and presented my research work as one of UWA Institute of Agriculture's 7 Outstanding PhD Students, Frontiers in Agriculture Postgraduate Showcase, University of Western Australia, Perth, 2021.
- Participated as committee member in International Conference on Biodiversity and Biosafety, University of Agriculture Faisalabad, Pakistan. (2024, May 27–29). The conference addressed topics such as biodiversity conservation, ecological security, plant protection, stress management, and sustainable horticultural systems, drawing international attendees from USA, India, Australia, China, and Korea.
- Participated in training workshop and delivered lecture on "Understanding White Leaf Spot Epidemics on Rapeseed" Continuing Learning workshop- (Online session, 11 November 2022). College of Science, University of Mustansiriyah, Baghdad, Iraq.
- Participated and was invited to deliver lecture on, Impact of Herbicide Application Timing on Different Fungal Foliar Diseases in Herbicide-Tolerant Rapeseed- Continuing Learning Workshop, (online session, 8 November 2024). College of Science, University of Mustansiriyah, Baghdad, Iraq.