

## Muhammad Mohsin Raza

Dept. Plant Pathology and Microbiology  
Iowa State University, Ames, IA 50010  
515-771-1725  
[mraza@iastate.edu](mailto:mraza@iastate.edu)

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### Education

Iowa State University, Ames, IA

#### Ph.D. in Plant Pathology and Microbiology

Dissertation: "Soybean Sudden Death Syndrome: Variation in disease intensity, pathogen density, canopy reflectance and yield at different spatial scales."

Expected Fall  
2019

University of Agriculture, Faisalabad, Pakistan

#### M.Sc. (Hons.) Plant Pathology

Thesis: "Exploiting the genetic potential of slow rusting wheat genotypes against Leaf and Stripe rust under epidemiological factors and their bio-rational management."

2014

University of Agriculture, Faisalabad, Pakistan

#### B.Sc. (Hons.) Agriculture

2012

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### Professional Experience

Graduate Research Assistant, Department of Plant Pathology and Microbiology, Iowa State University

2015-2018

Graduate Teaching Assistant, Department of Plant Pathology and Microbiology, Iowa State University

2018

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### Leadership Experience

Iowa State University

#### President, Pakistan Student Association

2017-2018

- Representative and official spokesperson of the Pakistani student community at Iowa State
- Representation of Pakistan's narrative, culture, and socio-economic interests at different platforms of Iowa State

#### Editor, Iowa State Daily

2017-2018

- Leading community discussion by providing insight into pertinent topics
- Deciding the subject of each opinion/editorial and its stance during weekly board meetings

#### Senator, Graduate and Professional Student Senate

2017-2018

- Advocate for Plant Pathology and Microbiology graduate students' welfare
- Critically reviewing and debating on Iowa State policies affecting the graduate student body
- Updating student bodies regarding any information or changes in school policies

#### President, Plant Pathology Graduate Student Organization

2016-2017

- Chief executive of the graduate student body
- A representative of Plant Pathology and Microbiology graduate students at Iowa State
- Planning and organization of different outdoor events
- Communicate organization plans and progress in departmental faculty meetings

#### Vice President, Pakistan Student Association

2016-2017

- Assisting the president in planning and accomplishment of events and general body meetings
- Representing the organization at different platforms of Iowa State
- Leading organization in the absence of the president

#### Vice President, Fulbright Students and Scholars

2016-2018

- Leading organization in an entirely different setup
- Working with Fulbright Association Iowa Chapter to plan and organize annual dinners, tours, and workshops
- Assisting the president in conducting her duties

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### Honors & Awards

Fulbright Scholarship, United States' Department of State

2015-2019

Golden Key International Honour Society

2018

AAAS/Science Program for Excellence in Science. Nominated by Dr. Wendy Wintersteen (President ISU)

2018

The Charles J. Gould Graduate Student Travel Award, Iowa State University

2018

Gamma Sigma Delta - The Honor Society of Agriculture

2018

Bayer/Isagro Scholarship Award, 63 <sup>rd</sup> Annual Conference on Soilborne Plant Pathogens, UC Davis	2017
Student Travel Award, North Central Division of The American Phytopathological Society	2016
Leath Fellowship, Iowa State University	2015-2016
Leath Assistantship, Iowa State University	2015-2016

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### Scientific Publications

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|------|---|
| 2016 | 1. <b>Raza, M. M.</b> , M. A. Khan, M. Yaseen, A. Munawar, and Z. Sabir. 2016. Exploring the potential of multivariate analysis to study the impact of cotton leaf curl disease on yield traits. <i>Pakistan Journal of Agricultural Sciences</i> . 53(3): 507-512.                                     |
| 2015 | 2. <b>Raza, M. M.</b> , M. A. Khan, I. Ahmad, A. A. Bajwa, H. M. U. Aslam, B. A. Ullah, and K. Riaz. 2015. Forest pathogens and diseases under changing climate -A Review. <i>Pakistan Journal of Agricultural Research</i> 28 (3): 318-337.  |
|      | 3. M. Mohsin, <b>M. M. Raza</b> , J. Shafi, M. Ali. 2015. Integrated fungicidal management for Downy Mildew of Pumpkin ( <i>Pseudoperonospora cubensis</i> ). <i>Bulletin of Advanced Scientific Research</i> .01(01):1-3.  |
|      | 4. Fatima, K., M. A. Khan, <b>M. M. Raza</b> , M. Yaseen, M. A. Iqbal, and M. U. Shahbaz. 2015. Identification of resistant source in lentil germplasm against Fusarium wilt in relation to environmental factors. <i>Academic Research Journal of Agricultural Science and Research</i> . 3 (4):60-70. |
| 2014 | 5. <b>Raza, M. M.</b> , M.A. Khan, M. Arshad, M. Sagheer, Z. Sattar, J. Shafi, E.u. Haq, A. Ali, U. Aslam, A. Mushtaq, I. Ishfaq, Z. Sabir and A. Sattar. 2014. Impact of global warming on insects. <i>Arch Phytopathol Plant Protect</i> . 48(1):84-94.   |
|      | 6. Ali, M., M. Hussain, <b>M. M. Raza</b> , R. M. M. Khan, W. Hussain, D. Saleem, and H. Abdussamee. 2014. Nutritional and Chemotherapeutic Management Strategies of Powdery mildew in Pumpkin. <i>International Journal of Bio-resource and stress management</i> . 5(1):132-137.                      |
|      | 7. Ehetisham-ul-Haq, M., F. Anjum, S. Hussain, M. A. Khan, A. Rashid, and <b>M. M. Raza</b> . 2014. Prediction of cotton seedling germination against pre-emergence damping off on the basis of environmental factors and seed-applied fungicides. <i>Arch Phytopathol Plant Protect</i> .1-10.         |
|      | 8. Nawaz, A., S. Naz, W. Ahmad, J. Shafi, C. Ayyub, M. Atiq, <b>M. M. Raza</b> , M. Ali and S. Asad. 2014. Characterization of Some Quantitative Traits of Locally Developed Tomato Hybrids Under Plastic Tunnels. <i>Universal Journal of Plant Science</i> . 2(3): 69 – 76.                           |
| 2013 | 9. <b>Raza, M. M.</b> , M. A. Khan, M. Atiq, R. Binyamin, and M. Javaid. 2013. Prediction of citrus canker epidemics generated through different inoculation methods. <i>Arch Phytopathol Plant Protect</i> . 47 (11):1335-1348.  |
|      | 10. <b>Raza, M. M.</b> 2013. Threats to agriculture in Pakistan and their remedies under Pakistani environment. <i>National academy of young scientist (NAYS) e-magazine</i> . (4):8-10.  |
|      | 11. <b>Raza, M. M.</b> , M.A. Khan, K. Riaz, Z. Sattar, A. Ali and A. Abbas. 2013. Impact of Climate Change on Agriculture. <i>National academy of young scientist (NAYS) e-magazine</i> . (5).   |

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### Abstracts Published

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| 2017 | 1. <b>Raza, M. M.</b> , S. Eggenberger, F. W. Nutter, Jr., L. F. Leandro. 2017. Can Canopy Reflectance be used for Early Detection of Soybean Sudden Death Syndrome? <i>Phytopathology</i> . APS North Central Division Meeting. June 14-16. University of Illinois at Urbana Champaign, Illinois.  |
|      | 2. Mushtaq, A., <b>M. M. Raza</b> , M. L. Gleason, K. Riaz. 2017. Integrated management of blossom end rot of tomato in Faisalabad, Pakistan. <i>Phytopathology</i> . APS North Central Division Meeting. June 14-16. University of Illinois at Urbana Champaign, Illinois.   |
| 2016 | 3. <b>Raza, M. M.</b> , M. A. Khan, M. Yaseen. 2016. Exploring the slow rusting potential of wheat genotypes against leaf and stripe rust of wheat. <i>Phytopathology</i> . APS Annual Meeting. July 30 – August 3. Tampa, Florida.   |
|      | 4. <b>Raza, M. M.</b> , Nutter, F. W., Jr., Holah, N., Eggenberger, S. K., Narvaez, D. F., Kelly, H., Isard, S., Wright, D., Marois, J. 2016. Comparison of visual disease assessment versus GIS/remote sensing methods to accurately detect the epicenters of Soybean rust foci. <i>Phytopathology</i> . APS North Central Division Meeting. June 7-9. University of Minnesota St. Paul Campus in Roseville, Minnesota.                                |
| 2015 | 5. <b>Raza, M. M.</b> , M. A. Khan, M. Yaseen, M. Atiq, A. Mushtaq, A. Ikram, K. Riaz. 2015. Biorational management of leaf rust of wheat caused by <i>Puccinia recondita</i> rob.ex. Desm. f. <i>Sp. tritici</i> . 10 <sup>th</sup> Biennial International Conference of Pakistan Society for Microbiology. Microbiology and Molecular Genetics, Punjab University. March 25-28, 2015.   |
|      | 6. Ikram, A., M. Atiq, S. T. Sahi, A. Mushtaq, <b>M. M. Raza</b> , H. M. U. Aslam. 2015. Potential of <i>Trichoderma harzianum</i> and Arbuscular mycorrhizal fungi to manage <i>Fusarium</i> wilt disease in tomato caused by <i>Fusarium oxysporum</i> f.sp. <i>lycopersici</i> . 10 <sup>th</sup> Biennial International Conference of Pakistan Society for Microbiology. Microbiology and Molecular Genetics, Punjab University. March 25-28, 2015. |
|      | 7. Mushtaq, A., S. T. Sahi, M. Atiq, K. Riaz, <b>M. M. Raza</b> , Amna Ikram. 2015. Evaluation of different plant activators for the management of Bacterial leaf spot of Mungbean. 10 <sup>th</sup> Biennial International Conference of Pakistan Society for Microbiology. Microbiology and Molecular Genetics, Punjab University. March 25-28, 2015.   |

- 2014
8. Mushtaq, A., S.T. Sahi, M. Atiq, K.Riaz, **M. M. Raza**, Parveen. 2014. Optimization of temperature and pH requirements of *Fusarium oxysporum* fsp. *Lycopersici* causing wilt diseases. 5<sup>th</sup> international conference on agriculture, food security and climate change. The University of Poonch. Rawalakot. September 9, 2014.
  9. **Raza, M. M.**, M. A. Khan, K. Riaz and M. Ali. 2014. Biochar, It's impact on plant resistance to biotic stresses. In international workshop on Biochar in Pakistan. Department of Agronomy, University of Agriculture Faisalabad, Pakistan.
  10. Mushtaq, A., M. Atiq, M. A. Khan, S.T. Sahi, **M. M. Raza** and M. Javed. 2014. Prevalence of citrus tristeza virus in district faisalabad and its confirmation through serological techniques. In 3rd International Conference of Pakistan Phytopathological Society, Climate Change and Plant Diseases Challenges and Opportunities. University of Karachi, Karachi, Pakistan.
  11. **Raza, M. M.**, M.A. Khan, M. Atiq, Z. Sattar, A. Ali, A. Mushtaq and M. Hussain. 2014. Identification of resistant source in wheat lines/varieties against leaf rust (*Puccinia recondita* rob. ex desm. f.sp. *tritici*). In 3rd International Conference of Pakistan Phytopathological Society, Climate Change and Plant Diseases Challenges and Opportunities. University of Karachi, Karachi, Pakistan.
  12. **Raza, M. M.**, M.A. Khan, Z. Sattar, H.M.U. Aslam, A. Ali and A. Mushtaq. 2014. Impact of changing climate on forest pathogens and diseases. In 3rd International Conference of Pakistan Phytopathological Society, Climate Change and Plant Diseases Challenges and Opportunities. University of Karachi, Karachi, Pakistan.
  13. Sattar, Z., M.A. Khan, **M. M. Raza**, H.M.U. Aslam, I. Ashfaq and J. Ahsan. A two environmental variable model to predict powdery mildew on pea caused by *Erysiphe pisi* DC. In 3rd International Conference of Pakistan Phytopathological Society, Climate Change and Plant Diseases Challenges and Opportunities. University of Karachi, Karachi, Pakistan.
  14. Atiq, M., S. Asad, J. Shafi, W. Ahmad and **M. M. Raza**. 2014. Impact of different fungicides against charcoal rot disease and yield attributes of mungbean. In 3rd International Conference of Pakistan Phytopathological Society, Climate Change and Plant Diseases Challenges and Opportunities. University of Karachi, Karachi, Pakistan.
- 2013
15. **Raza, M. M.**, M.A. Khan, A. Ali, and Z. Sattar. 2013. Evaluation of multiple regression models based on epidemiological factors to predict citrus canker epidemics generated through different inoculation techniques. In KMRC Multidisciplinary Research Conference. Kinnaird College.
  16. **Raza, M. M.**, M. A. Khan, M. Bilal, U. Naseer, and M. A. Bhatti. 2013. Response of food deteriorating *Penicillium* species to different disinfectants and preservatives. In International conference on emerging issues in Nutrition and Food Safety. National Institute of Food Science and Technology, University of Agriculture Faisalabad.

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#### Oral Presentations

- 2017
1. "Soybean Sudden Death Syndrome: Variation in disease intensity, pathogen density, canopy reflectance and yield at different spatial scales." The 63rd Annual Conference on Soilborne Plant Pathogens and The 49th California Nematology Workshop. March 28-30. University of California, Davis.
- 2016
2. "Comparison of visual disease assessment versus GIS/remote sensing methods to accurately detect the epicenters of Soybean rust foci." APS North Central Division Meeting. June 7-9. University of Minnesota St. Paul Campus in Roseville, Minnesota.
  3. "Exploring the slow rusting potential of wheat genotypes against leaf and stripe rust of wheat." 3rd Annual Graduate and Professional Students' Research Conference. April 12. Iowa State University of Science and Technology, Ames, Iowa.
- 2015
4. "Biorational management of leaf rust of wheat caused by *Puccinia recondita* rob.ex. Desm. f. Sp. *tritici*". 10<sup>th</sup> Biennial International Conference of Pakistan Society for Microbiology. March 25-28. Punjab University, Lahore.
- 2013
5. "Evaluation of multiple regression models based on epidemiological factors to predict citrus canker epidemics generated through different inoculation techniques. Kinnaird multidisciplinary research conference". December 18-19. Kinnaird College, Lahore.

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#### Poster Presentations

- 2018
1. "Time of sudden death syndrome foliar symptom onset influences soybean yield". APS North Central Division Meeting. June 12-14. Fargo, North Dakota.
- 2017
2. "Can Canopy Reflectance be used for Early Detection of Soybean Sudden Death Syndrome?" APS North Central Division Meeting. June 14-16. University of Illinois at Urbana Champaign, Illinois.
  3. "Integrated management of blossom end rot of tomato in Faisalabad, Pakistan" APS North Central Division Meeting. June 14-16. University of Illinois at Urbana Champaign, Illinois.
- 2016
4. "Exploring the slow rusting potential of wheat genotypes against leaf and stripe rust of wheat." APS Annual Meeting. July 30 – August 3. Tampa, Florida.

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#### Popular Articles

##### National Language (Urdu)

- 2014
1. **M. Mohsin Raza**, M. Aslam Khan. 2014. Global warming and insects. Submitted in Zarai Digest.
  2. **M. Mohsin Raza**, M. Aslam Khan, Aleena Mushtaq. 2014. Nutritional management of plant diseases. Submitted in Engro Behtar Zindagi.

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	3. <b>M. Mohsin Raza</b> , M. Aslam Khan. 2014. Genetically modified foods and food security. Submitted in Engro Behtar Zindagi.
2013	4. <b>M. Mohsin Raza</b> , M. Aslam Khan. 2014. Tobacco Mosaic Virus. Zarai Digest, Jan-March 2013.
	5. <b>M. Mohsin Raza</b> .2013. Whip Smut of Sugarcane. Engro Behtar Zindagi. Kharif 2013.
2011	6. <b>M. Mohsin Raza</b> .2013. Red Rot of Sugarcane. Engro Behtar Zindagi. Kharif 2013.
	7. Dr. M. Atiq, Dr. Nazir Javed, <b>M. Mohsin Raza</b> , Aadil Nawaz, Zeeshan Iqbal. April-June 2011. Common Scab of Potato. Zarai Digest. 46 (02).
	8. Irfan Ahmad, <b>M. Mohsin Raza</b> , Umair Anwar, S. T. Sahi. March 2011. Global Warming. Zarai Digest. 46 (01).
	9. Dr. Atiq, Mubashir Ali, Tayyab Ilyas, <b>M. Mohsin Raza</b> , Zeeshan Iqbal, Aadil Nawaz. Feb 2011. Bacterial Wilt of Tomato. Niday Kisan. 24 (02).
	10. Dr. Atiq, Waqas Hussain, Humaira Saeed, Tehmina Javed, <b>M. Mohsin Raza</b> , Aadil Nawaz. Jan 2011. Brown Shrank. Niday Kisan. 24 (01).
2010	11. Hafiz Salman Saeed, <b>M. Mohsin Raza</b> , Umair Anwar, Tahir Munir Butt. July-December 2010. Role of Solar Energy in the Rural Development. Zarai Digest Technology Transfer No 2010. 45 (03).
	12. Dr. Atiq, <b>M. Mohsin Raza</b> , Zeeshan Iqbal, Jawad Khan, Adnan Farid. Dec 2010. Solar Energy and Rural Development. Kisan Risala 08 (02).
	13. Dr. Atiq, <b>M. Mohsin Raza</b> , Aamna Ikram, Aadil Nawaz, M. Sarfraz. Dec 2010. Global Warming. Kisan World. 01 (12).
	14. Dr. Atiq, Adnan Hussain, Jamil Shafi, Tehmina Javed, Aadil Nawaz, <b>M. Mohsin Raza</b> . Sep 2010. Black Shrank of Sweat potato. Niday Kisan. 23 (09).
	15. Tallat Bilal Yasooob, <b>M. Mohsin Raza</b> , Dr. Atiq, Dr. S.T. Sahi. May 2010. Role of Live Stock in Global Warming. Niday Kisan. 23 (05).

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#### International Language (English)

2015	1. <b>M. Mohsin Raza</b> , Muhammad Aslam Khan, Waqar Iqbal. 2015. Role of IT in Modern Agriculture. Technology Times. 06(24).
2014	2. <b>M. Mohsin Raza</b> , Muhammad Aslam Khan. 2014. Plant Disease Modelling: A Better Approach to Manage Plant Diseases. Submitted in NAYS e-Magazine.
	3. <b>M. Mohsin Raza</b> , Muhammad Aslam Khan, Muhammad Arshad, Zeeshan Sattar, Iqra Ishfaq, Usman Aslam, Asim Ali. 2014. Global warming and Insects. NAYS e-Magazine. (06).
	4. <b>M. Mohsin Raza</b> , Muhammad Aslam Khan, Zeeshan Sattar, and Asim Ali. 2014. Impact of Climate Change on Rice Production. Rice Plus. Volume 6-Issue 1: 6-7.
	5. Zeeshan Sattar, Dr. Muhammad Aslam Khan, Iqra Ashfaq, and <b>M. Mohsin Raza</b> . Importance of Rice Blast and their Management Strategies. Rice Plus. Volume 6-Issue 1: 6-7.
2013	6. <b>M. Mohsin Raza</b> , Zeeshan Sattar, Muhammad Aslam Khan, Sabir Khan. July 08-21. Constraints in Livestock Sector of Pakistan. Technology Times. 04(28-29).
	7. <b>M. Mohsin Raza</b> . M. Aslam Khan. Zeeshan Sattar. June 24-July 7. Constraints of Citrus Industry in Pakistan. Technology Times. 04 (26-27).
	8. <b>M. Mohsin Raza</b> . June 17-23. The burning abodes. Technology Times. 04(25).
	9. <b>M. Mohsin Raza</b> . Muhammad Aslam Khan, Karim Yar Abbasi, Kashif Riaz, Fatma Hussain. June 10-16. Need to Explore Indigenous Medicinal Plants. Technology Times. 04(24).
	10. <b>M. Mohsin Raza</b> . M. Aslam Khan. Zeeshan Sattar. May13-May19. Green Energy is the Future. Technology Times. 06(20).
	11. <b>M. Mohsin Raza</b> . Zeeshan Sattar, Asim Ali, Aiman, Iqra Ishfaq and Zarnab. Feb-April. Climate Change and Forest Diseases. NAYS e-Magazine. (03).
	12. <b>M. Mohsin Raza</b> . Nov 2012 - Jan 2013. Climate Change and Diseases of Food Crops. NAYS e-Magazine. (02).
2011	13. Dr. M. Atiq, Dr. Nazir Javed, <b>M. Mohsin Raza</b> , Aadil Nawaz, Zeeshan Iqbal. May. Tourism in Pakistan. Kisan Risala. 13 (02).
	14. Dr. Atiq, Dr. M. Aslam Khan, Dr. Nazir Javed, Amana Ikram, <b>M. Mohsin Raza</b> , Aleena Mushtaq. May. Pakistan's Agriculture Challenges & Suggestions. Kisan Risala. 13 (02).
	15. Dr. Atiq, Dr. Shahbaz Talib Sahi, Dr. Nazir Javed, <b>M. Mohsin Raza</b> . February. A Hanging Sword on Pakistan Agricultural Economy. Kisan Risala. 10 (02).