

CURRICULUM VITAE

Professor Dr Muhammad Azim Khan

Professor

Department of Weed Science & Botany

The University of Agriculture, Peshawar- Pakistan 25130

(Email: azim@aup.edu.pk)

SCI_ID: 234 <https://orcid.org/0000-0003-2384-9632>

Web of Science Researcher ID B-6714-2015

Total Citations: 4021

H index: 38

I index: 95

Total Impact factor: 115.6

HEC Approved Supervisor

(for PhD)

IRTC approved Supervisor

(006-HM-22, Herbs and Medicinal plants),
Government of Khyber Pakhtunkhwa

EDUCATION

Degree	Division	Year	Institution
Post-Doctorate	1 st	2008	AAFC, Alberta, Canada
PhD	1 st	2006	The University of Agriculture Peshawar
M.Sc. (Hons)	1 st	2002	The University of Agriculture Peshawar
B.Sc (Hons)	1 st	2000	Gomal University D.I. Khan
F.Sc	1 st	1995	BISE Bannu
SSC	1 st	1992	BISE Bannu

1. Post-doctorate (Weed Science: 2008
2. PhD in Weed Science, The University of Agriculture Peshawar, Pakistan 2006
3. M.Sc. (Hons) Weed Science: University of Agriculture Peshawar, Pakistan 2002
4. B. Sc. (Hons): Gomal University D.I. Khan, KP, Pakistan 2000
5. F.Sc. (Pre-Eng): BISE Bannu 1995
6. S.S.C. (Science: BISE Bannu 1992

EXPERIENCE as teacher, researcher and education administrator:

23 Years

Designation/Post held	BPS	Appointment held
Professor	21	March 04, 2022 till date
Associate Professor	20	30-05-2012 – March 03, 2022
Assistant Professor	19	12-01-2009 to 29-05-2012
Lecturer	18	13-01-2007 to 11-01-2009
Lecturer	17	21-09-2002 to 12-01-2007

ADMINISTRATION

Designation/Post held	BS	Appointment held
Director ORIC	21	June 28, 2019 - April 17, 2022
Chairman	21	August 11, 2021 – November 20, 2024
Chairman	20	July 11, 2012 – January 25, 2016
Incharge/Head of Department	19	November 13, 2010 to July 10, 2012
Staff Proctor	19	July 28, 2010 - July 28, 2011
Deputy Director, Advanced Studies and Research	20	August 20, 2010 - June 27, 2019
Convener University Admission Test	20	2020 – 2022
Warden, Foreign Faculty and STRC Guest House	20	August 2, 2010 - August, 2013 January 2018 – November, 2023

AWARDS RECEIVED

Best University Teacher Award, HEC (2014)
Gold Medal (Pakistan Academy of Sciences 2010)
Environmentalism of the year (2010) by National Environmental Science Academy of India
Research Productivity Award 2012 (PCST)
Research Productivity Award 2011 (PCST)
Research Productivity Award 2010 (PCST)
Post-Doc fellowship, sponsored by HEC
First Position in M.Sc Hons. Weed Science
Second position in B.Sc. Hons. Agronomy
Best Presentation Award (International) in 9th ACPP at Damascus, Syria (November 2006)
IWSS Scientists travel support Award for the 9th IWSC of 2025

MEMBER OF NATIONAL BODIES/NATIONAL RECOGNITION

- Vice President, Weed Science Society of Pakistan
- Life Member, Executive Body Member, Vice President WSSP
- Country Representative, Asia Pacific Weed Science Society
- Member, Agricultural Pesticide Technical Advisory Committee (APTAC) April 03, 2024 to April 02, 2027. Ministry of National Food Security and Research, Govt of Pakistan
- Member, National Curriculum Review Committee. May 27-28, 2024. Higher Education Commission, regional Center, Lahore.
- Member Technical Working Group (TWG) CABI International

PROFESSIONAL SOCIETIES MEMBERSHIP

- International Weed Science Society (Life member No. 08AJF114)
- National Environmental Science Academy of India (Life Member)
- Weed Science Society of Pakistan (Life Member)
- Weed Science Society of Vietnam (2005)
- Pakistan Botanical Society (Life Member)
- Asia-Pacific Weed Science Society (APWSS)
- Arab Society of Plant Protection (ASPP)
- Near East Weed Science Society (NEWSS)
- Alternative Resources Center (ARC), Pakistan
- Asia-Pacific Chemical, Biological & Environmental Engineering Society (APCBEEES)
- Member, Agricultural University Teachers Foundation (AUTF)

- Member, International Society for Gastronomic Sciences and Studies

PROFESSIONAL GOALS

- To ensure educational excellence, student success, faculty development, financial management and technology integration.
- To promote research and innovation, strategic planning and community engagement.

SERVICES

- Coordinator, European Union Research Commission projects (LEAR)
- Resource person for Pakistan Academy of Rural Development (PARD)
- Focal person in Weed Science department for Planning and Development
- PhD. Examiner, Gomal University D.I. Khan
- Member, Selection Board, Gomal University, D.I. Khan
- Member, Purchase committee in Weed Science department
- Member, departmental discipline committee in Weed Science
- Member, Board of Advanced Studies and Research
- Member, Academic Council, University of Agriculture, Peshawar
- Convener, University Admission Test (2019 – till date)
- Member, Research Projects Committee
- Member, Statutes Committee AUP 2023
- Member, Evaluation & Quantification Committee
- Convener, University Recruitment Committee 2023
- Coordinator, Role of Women in Agriculture. Workshop held on May 16, 2024, University of Agriculture Peshawar, sponsored by CABI.

MEMBER ADVISORY BOARD/EDITOR/ REFEREE

- Member Advisory Board, International Journal of English and Emerging sciences (IJES)
- Editor, Journal of Botanical Research and application (JBRA)
- Assistant Chief Editor/Editor, Pak. Journal of Weed Science Research
- Editor, Sarhad Journal of Agriculture
- Editor, Journal of Agri-Food and Applied Sciences
- The Journal of Natural and Applied Science
- Reviewer, Journal of Agric. Extension and Rural Development
- Reviewer, Bulletin on Agricultural Science (India)
- Reviewer, Pest Technology
- Reviewer, Journal of Medicinal Plant Research
- Reviewer, Journal of Plant Breeding and Crop Science
- Reviewer, Pakistan Journal of Agriculture Sciences
- Reviewer, African Journal of Pharmacy and Pharmacology
- Reviewer, The Philippine Agricultural Scientist
- Reviewer, Pakistan Journal of Botany
- Reviewer, Crop Protection, Elsevier publisher
- Reviewer, Journal of Crop Improvement
- Reviewer, Weed Research (Europe)
- Egyptian Journal of Agricultural Research
- Editor, Himalayan Journal of Botanical Sciences

Computer Driving License) ICDL (International)

Three months training in computer (Online from UK)

ADDITIONAL PROFESSIONAL TRAININGS

1. Three Months training in Computer skills, during winter, 1999.
2. One Week Training Workshop “Training in Weed Science” October 2001 at NWFP Agricultural University Peshawar sponsored by U.G.C. H-9 Islamabad.
3. One Week Training “Training in Latest Developments in Molecular Biology & Biotechnology” at U.G.C. Regional Office Lahore, 2001.
4. One week training “Training in Designing Crop Experiments” at Department of Agronomy, NWFP Agricultural University Peshawar, 2003
5. One week training “Conducting Crop Experiments & Experimental Techniques “Training in Designing Crop Experiments” at Department of Agronomy, NWFP Agricultural University Peshawar, 2003.
6. Five day course on “Information Technology & Computer Application in Public Sector Organization” September 20-24, 2004. at PARD, Peshawar.
7. Attended training on “Advances in Plant Ecology” in University of Karachi July 2006.
8. Three Months Certificate in Faculty Development Program at Higher Education Commission, Islamabad June 13 to September 09, 2006.)
9. PC-1 Development: 3-Days Training, NWFP Agric. Univ. Peshawar (16-18 July, 2007)
10. International Workshop on Web-based tools for plant science research, HEC-British Council Links Program, NWFP Agric. Univ. Peshawar: 4 days (April 16-19th, 2007).
11. Environmental Impact Assessment of Agriculture, Livestock and Fisheries sector projects; EPA, NWFP, Peshawar. (February 12-16, 2007)
12. Intel Teach Program Essential Course: 4-8 Sept. 2007, University of Karachi
13. Development of sustainable and collaborative research networks. British Council- Higher Education Commission. Talented researchers exchange program. October 21-22, 2010. KPK Agricultural University Peshawar.
14. Training of Master Trainers (ToT), LID, Higher Education Commission, HEC Regional Center Lahore, November 1-4, 2010.
15. Faculty Professional Development program. Asian Institute of Technology, Thailand, March 6-25, 2011.
16. International short course on Allelopathy-2011: Modern allelopathy research methods. July 27-August 1, 2011. Northeast Agricultural University, Harbin, China.
17. Referencing and EndNote. February 25, 2012, NUST, Islamabad.
18. Managing patentable research. November 10, 2012, IRP, Lahore. Agric. Univ. Peshawar
19. Two days orientation and training workshop on GIS/RS, January 09-10, 2013, University of Peshawar.
20. Data analysis technique for crops, animals and social sciences, February 06, 2014. University of Agriculture Peshawar,
21. 3rd Biosafety training workshop for young scientists, January 28, 2014. UoA, Peshawar
22. Technical writing and publishing in scientific journals. By Dr. Edward Robert, Chinese Academy of Sci. The Univ. of Agriculture Peshawar. May 14, 2014.
23. Prospective of present and future weed research under climate smart agriculture. August 17-20, 2020. CAAST, India.
24. Dry chain technology for reducing post harvest losses. The University of Agriculture Peshawar. December 23-24, 2021.
25. 4th joint training program (Online). Science, technology and innovation policy and tools for sustainable development in the belt and road countries, COMSTECH, Islamabad. December 15th, 2021.
26. Biological control of *Parthenium hysterophorus* in Pakistan using stem boring weevil. November 17-18, 2022. Lahore, Pakistan.
27. Three days seminar on Data analysis tools in social, agriculture and health sciences. Organized by the Department of Mths, stats and computer Science, August 28-30, 2023. Baragali Summer Campus, University of Peshawar.

28. Training workshop for NAEAC program Evaluators. National Agriculture Education Accreditation Council, HEC, Islamabad. November 02, 2023.
29. Training workshop on registration of Biopesticides in Pakistan. CABI-Ministry of National Food Security and Research, Govt of Pakistan. June 24-27, 2024. Karachi.
30. Training workshop on Development of IPM packages compatible with Trichogramma for tomatoes. August 29-30, 2024. PC Rawalpindi, Pakistan.

NATIONAL AND INTERNATIONAL CONFERENCES ATTENDED/ INVITED SPEAKER/INTERNATIONAL CONFERENCES/WORKSHOPS ORGANIZED

1. Attended 4 days First International Weed Science Conference October 23-26, 2003 at NWFP Agricultural Univ. Peshawar
2. Presented paper in Annual Meeting of WSSP held in October, 2003 in Peshawar.
3. Presented paper in 6th National Weed Science Conf. March, 2005, Peshawar
4. Presented paper in 20th APWSS, Conference, November 7-11, 2005, Vietnam
5. Workshop for in-service teacher's of Botany. August 9-14, 2005. The University of Agriculture Peshawar.
6. Presented paper in 2nd WSSP, International Weed Science Conference, March 20-22, 2006, Rawalpindi.
7. Presented paper in 9th Arab Congress of Plant Protection (ACPP), 19-23 November, 2006 at Damascus, Syria
8. Presented paper in 5th International Weed Science Congress June 22-27, 2008 at Vancouver, Canada
9. Presented paper in Taibah International Chemistry conference March 23-25, 2009 at Al-Madinah Al-Munawarah, Saudi Arabia
10. Presented paper in "Advance in Agriculture Prospects and Potentials of Natural Recourses in Food Security" 11-13 August 2009, University of Azad Jammu & Kashmir, Faculty of Agriculture Rawalakot
11. Presented scientific paper in 22nd Asian Pacific Weed Science Society, March 8-12, 2010 at Lahore Pakistan.
12. Climate Change and sustainability of Agro-Environment: Challenges and Interventions, June 3-4, 2010 at PMAS-Arid Agric. Univ. Rawalpindi
13. Technological interventions for food and environment security. June 28 – July 2, 2010, Bara Gali, Abbottabad.
14. Utilization of modern agriculture technology in changing environmental perspectives. 21-23 July, 2010, Faculty of Agriculture, Rawalakot, AJK
15. Biodiversity is our life. Shah Abdul Latif University, Khairpur, Sindh, Pakistan, December 29-31, 2010.
16. 3rd International Weed Science Congress, April 18-20, 2011, Agricultural university Peshawar
17. Climate change, Agri-Food, Fisheries and Ecosystems. May 19-21, 2011, Agadir, Morocco.
18. 23rd Asian-Pacific Weed Science Society conference "Weed management in changing world". September 26-29, 2011, The Sebel Cairns, Queensland, Australia.
19. Ensuring food security through prevention of biodiversity loss" COMSTECH, Islamabad, April 18-20, 2012.
20. International workshop on "Green Economy", COMSTECH, Islamabad May 16-18, 2012.
21. 2013 Annual meeting/conference of Weed Science Society of America, Baltimore, Maryland, February 04-07, 2013.
22. Two days Symposium on "Application of frontier technologies and climate change. November 29-30, 2013, SBB University Sheringal, Upper Dir, KPK
23. International conference on Asian Monsoon and Climate Change, January 20-21, 2014,

- CIIT, COMSATS, Serena Hotel, Islamabad.
24. 4th International and 13th National Conference of PBS", held at SBBU Sheringal, Upper Dir" KPK, Pakistan, Aug 26-28, 2014.
 25. 5th International and 12th National conference of Weed Science Society of Pakistan. June 12-14, 2015, SBB University Sheringal, Upper Dir, KPK, Pakistan.
 26. International Conference on Mountains and Climate change, September 17–19, 2015, KIU, Gilgit, Pakistan.
 27. 5th International / 10th National Conference of Pakistan Phytopathological Society, held at Institute of Agricultural Sciences, University of the Punjab, 23-25 November 2015.
 28. International conference on major environmental constraints to plants: Assessment and reclamation. March 28-30, 2016. GC University Faisalabad.
 29. 13th National Weed Science conference, SBB University Sheringal, Upper Dir, KP, Pakistan. August 19-21, 2016.
 30. VII International Scientific Agriculture Symposium "Agrosym 2016" at Jahorina, Bosnia and Herzegovina. October 6-9, 2016.
 31. International conference on Asia-Pacific Policy Dialogue on water, energy and food security for poverty alleviation in arid regions of Pakistan. Arid Agriculture University Rawalpindi. November 23-25, 2016.
 32. National conference on Think-Adapt-2016. University of Agriculture Peshawar. November 28-30, 2016.
 33. 1st International salinity conference, December 19-21, 2016. Islamia University Bahawalpur.
 34. International Conference, "Advances in Agricultural Resource Management" University of Agriculture, Faisalabad-Pakistan from April 5-7, 2017.
 35. Third International Symposium on the conservation issues of edible wild resources of Hindu-Kush Himalayas. July 21-25, 2017, Bragalli, Abbottabad, Pakistan.
 36. Three day International Capacity Building Training Workshop" November 14-16, 2017, Department of Zoology, SBB University Sheringal, Upper Dir, KP, Pakistan.
 37. Climate Change: threats to Agriculture and Food Security" from 22-24 November, 2017, University of Agriculture Peshawar.
 38. The 1st international conference on applied agricultural sciences and prospective technology. February 23-26, 2018. Luxor, Egypt.
 39. 3rd International conference on Bioscience-2018. May 09-11, 2018. GC University Lahore, Pakistan
 40. 14th National Weed Science conference. March 25, 2018. Islamia College University Peshawar.
 41. National conference on "Agricultural problems and food security in the changing climate". November 14-17, 2018, University of Agriculture Peshawar.
 42. International Conference on "Water Saving and Plant Production Strategies: Constraints and Implications for Sustainable Agriculture" scheduled to be held during March 26-28, 2019 at Department of Botany, Government College University, Faisalabad (GCUF), Pakistan
 43. 1st International Conference on Sustainable Agriculture: Food Security under Changing Climate Scenarios (ICSA-2019) is going to be held on 3-5 April, 2019 at Ghazi University, Dera Ghazi Khan, Punjab, Pakistan.
 44. National conference on "Beneficial microbes and sustainable crop production". The University of Agriculture Peshawar. February 19-20, 2020.
 45. 1st International conference on innovations in agriculture to ensure global food security. Islamia University Bahawalpur. November 10, 2021.
 46. 17th national Weed Science conference, University of the Punjab, Lahore. November 14-15, 2022.
 47. External Evaluation of CABI's PlantwisePlus Program in Pakistan, CABI Head Office. Rawalpindi. March 02, 2023.
 48. International conference on Food security through sustainable agriculture strategies

- in the current climate change scenario. March 08-10, 2023. University of Agriculture Peshawar.
49. International conference on sustainable agriculture and food security. August 27-31, 2023. Baragali Summer campus, University of Peshawar.
 50. 9th International conference on Biodiversity and Medicinal plants: a way forward to sustainable development. December 14-16, 2023, PMAS Arid Agriculture University, Rawalpindi.
 51. International conference on climate change. Nangarhar University, Ministry of Higher Education, Afghanistan. February 10-12, 2024.
 52. Advances in seed storage techniques. April 25-26, 2024. University of Agriculture Peshawar
 53. Coordinator, Role of women in agriculture. CABI, The University of Agriculture Peshawar. May 16, 2024.
 54. 2nd International conference on computing technologies, tools and applications. June 4-6, 2024, University of Agriculture Peshawar.
 55. International conference on Breakthrough in Pakistan Economic Development Through Technological Innovation in Agriculture - A Policy Approach. July 29-31, 2024. Baragali, Summer Campus, Abbottabad.
 56. International water conference. February 24-26, 2025, Kabul Polytechnic University Kabul, Afghanistan.
 57. 2nd international conference on climate change impacts on agriculture and food security, April 22-24, 2025. University of Swabi, KP Pakistan
 58. Climate-smart solution for food security, sustainable agriculture, seed production and storage. April 29-30, 2025. University of Agriculture Peshawar.
 59. 2nd International conference on green agriculture for future harvests. February 10-12, 2026, Ghazi University Dera Ghazi Khan, Pakistan.
 60. Pak-Sri Lanka Faculty Exchange program, sponsored by Higher Education Commission, Islamabad. January 22-February 02, 2026. University of Ruhuna, Matara, Sri Lanka.

PUBLICATIONS

140 Research papers in Impact factor/HEC recognized journals

NEW COURSES DEVELOPED

1. ICT in Weed Science
2. Ethics in Weed Science
3. Weeds: Problem or a resource
4. Medicinal weeds and their utilization
5. Allelopathy

COURSES TAUGHT

Applied Weed Science, General Weed Science, Plant Ecology-I, Plant Ecology II, Introduction to Chemical Weed Control, Weed Ecology, Weed Physiology, Introduction to weed science, Advanced Weed Ecology, Weed Management in Lawns, Integrated Weed Management, Biodiversity in Ecosystem, Invasive Weeds and climate change, Allelopathy, Medicinal Plants. Weed Management in fruits and vegetables

Undergraduate students supervised and awarded degree (30)

- | | | |
|-------------------|-------------------|------------------|
| 1. M. Saeed | 2. Haroon Khan | 3. Sumaira Sadaf |
| 7. Noor Wali Khan | 5. Muhammad Yasir | 6. Anwar Nawaz |
| 7. Tamanna Bakht | 8. Rahamdad Khan | 9. Umm-e-Kalsoom |
| 10. Abrar Ahmad | 11. Abbas Ali | 12. Arif Ullah |

- | | | | |
|----------------------|----------------------|---------------------|------------|
| 13. Laila Waris | 14. Ambreen Waris | 15. Jan Sher | 16. Fayaz |
| 17. Zeeshan Aziz | 18. Abdullah | 19. Basit Habib | 20. Salman |
| 21. Shahab Ali | 22. Shuja Ullah Khan | 23. Mahmood Hussain | |
| 24. Abdus Samad Khan | 25. Afreen | 26. Moizza | 27. Nazish |
| 28. Mahishba | 29. Kainat | 30. Nida Shah | |

Graduate students (M.Sc. (Hons/M.Phil) supervised and awarded degree (13)

- | | | |
|---------------------------|-----------------------|-------------------------------|
| 1. Waheed Ullah | 2. Shafaq Ahsan | 3. Masooma Tariq |
| 4. Anwar Nawaz | 5. Siraj ud Din Kakar | 6. Rahamdad Khan |
| 7. Umm-e-Kalloom | 8. Abbas Ali | 9. Shaheen Kashmir, (M. Phil) |
| 9. M. Asif Raza (M. Phil) | 11. Tasneem ur Rehman | 12. Aman Khan |
| 13. Badar Ijaz Khan | 14. | |

PhD Scholars Produced (Awarded degree) 03

1. Dr. Muhammad Riaz Afridi (Completed)
2. Dr. Umm-e-Kalloom (Completed)
3. Dr. Muhammad Fawad (Completed)

Member of PhD supervisory Committee/Co supervisor 05

- | | |
|---|-----------------------|
| 1. Muhammad Zafarullah Khan, Agric, Extension | 2009 |
| 2. Haroon Khan | Weed Science 2012 |
| 3. Miss Shahida Bibi | Weed Science 2014 |
| 4. Mr. Fazli Wahid | Soil Science 2016 |
| 5. Imtiaz Khan | Plant Protection 2023 |

Member of M.Sc (Hons)/M. Phil supervisory Committee/Co supervisor 10

1. Arifullah (Weed Science, 2016)
2. Waqar Khan (Entomology, 2023)
3. Liaqat Khan (Plant Protection, 2022)
4. Shahbaz Ahmad (Horticulture, 2022)
5. Salah ud Din (Plant Protection, 2023)
6. Abdullah (Plant Breeding & Genetics, 2023)
7. Shahid Yar (Plant Protection, 2023)
8. Iqra Fida (Agric. Chemistry, 2023)
9. Ehtisham ul Haq (Plant Protection, 2024)
10. Khalil (Plant Protection, 2024)
11. Muhammad Javed (Plant Protection, 2024)
12. Sohaib Khan (Plant Protection, 2025)

Experience related to Statutory Bodies

- Convener, University Admission Test (UAT): 2019-2022
- Convener, University Recruitment Test (2023)
- Member, University Statutes Committee (2023)
- Member, Eligibility & Quantification Committee
- Member Board of Studies in Weed Science (January 20, 2007 till date)

Member Board of Studies in Plant Protection (January, 2010 -2013)
Member Board of Studies in Agricultural Chemistry (April 2010 to 2013)
Member Board of Advanced Studies and Research
Member, Academic Council (Governor Nominee)
Member, Academic Council (Elected) 2016-18
Focal person for Planning and Development (July 2005-2008)
Member, Agricultural University Teachers Foundation (AUTF) 2015-16

TRAININGS/CONFERENCES/WORKSHOPS ORGANIZED

1. One week teachers' training on "Biodiversity and Weed Science" December 11-16, 2006 sponsored by HEC.
2. Cascading of AIT Based Training Program "Ensuring Training Effectiveness" (July 04-06, 2012) Agricultural University Peshawar.
3. National conference on "Agricultural problems and food security in the changing climate". November 14-17, 2018, University of Agriculture Peshawar.
4. 14th National Weed Science conference. March 25, 2018. Islamia College University Peshawar
5. Weed interferences, herbicide calculation and calibration. Provincial Agricultural Services Academy, Peshawar. June 24-25, 2019. Sponsored by Pakistan Science Foundation, Islamabad.
6. 16th National Weed Science conference of the Weed Science Society of Pakistan. July 08-10, 2021. The University of Agriculture Peshawar.
7. International conference on Food security through sustainable agriculture strategies in the current climate change scenario. March 08-10, 2023. University of Agriculture Peshawar.
8. International conference on sustainable agriculture and food security. August 27-31, 2023. Baragali Summer campus, University of Peshawar

Services to Community

1. Consultant, Weed management in Taxila Archeological sites
2. Weed management expert for Pakistan tobacco Board
3. Weed identification for Police department, KPK
4. Weed management adviser for local farmers

Countries visited to attend scientific conferences and represent Pakistan

- | | | | | |
|--------------------------|-------------|-----------------|---------------|-----------------|
| 1. USA | 2. Canada | 3. Australia | 4. Morocco | 5. Saudi Arabia |
| 6. Vietnam | 7. Malaysia | 8. Syria | 9. Thailand | 10. China |
| 11. Bosnia & Herzegovina | 12. Egypt, | 13. Afghanistan | 14. Sri Lanka | |

RESEARCH PROJECTS

Principal Investigator/ Lead Supervisor of Research Projects:
On-going projects

1. Exploring the potential of wild plants in dry zones of Khyber Pakhtunkhwa and Punjab. Sponsored by Higher Education Commission, Islamabad. Amount Rs. 5.7 Million

Completed

1. Domestic, foreign and religious surveys of NWFP, Sponsored by Ministry of Tourism, Islamabad, Pakistan: 2007: (Rs. 0.30 Million).
2. Soil solarization: A Non-Chemical Weed Management Approach in Cash Crops”, funded by AUP-HEC: 2007 (Rs. 0.20 Million).
3. Soil fertility and Economic benefits of maize-legume intercropping and weed suppression by inter-row cultivation (Sponsored by HEC, Islamabad (Rs. 0.913 Million).
4. Prediction of grain yield losses and implications for economic weed management in Khyber Pakhtunkhwa, PARC/ALP (Rs. 5.69 Million).
5. The long-term effects of tillage, nutrients and weed management on sugar beet yield and weed seed bank (HEC, Rs. 2.2 Million).
6. Domestication, Conservation and cultivation of Medicinal Plants at high altitude of Pakistan (ALP/PARC Rs. 4.8 Million).
7. Integrated approaches to manage parasitic weed Broomrape (*Orobancha* sp.) in major cash crops in KPK and Balochistan Provinces (USAID/CIMMYT), Rs. 3.50 Million.
8. Exploring the potential of wild plants in dry zones of southern Punjab and Khyber Pakhtunkhwa, (HEC, 5.6 Million).

Co-Principal Investigator

1. Environment friendly weed management in vegetables. Sponsored by Higher Education Commission (HEC), Islamabad. Rs. 2.217 Million (Jan 2014-Dec 2016).
2. Evaluation and cultivation of Jatrohpa in KPK. (Directorate of Science and Technology, KP, Pakistan (Directorate of Science and Technology, KPK. Rs. 3.00 Million).
3. Response of potato and associated weeds to water extracts of major trees of Upper Dir, KP. Sponsored by Higher Education Commission, Islamabad. Rs. 0.4 Million

INTERNATIONAL COLLABORATION

1. Pak-Sri Lanka Faculty Exchange Program
2. Enhancing the international cooperation in China and Pakistan with research direction dedicated to soil ecology and polluted soil remediation and soil greenhouse gases mitigation. Sponsored by Chinese Ministry of Science and Technology
Dr. Prof. Hong-sheng Wu, Department of Agricultural Resources and Environment, Nanjing University of Information Sci. and Technology, Nanjing, Jiangsu, China

AUTHOR OF BOOK CHAPTERS

BOOK CHAPTERS

1.
Title: Sustainable management of rice blast [*Magnaporthe grisea* (Hebert) Barr]: 50 years of research progress in molecular biology
Authors: S. Nandy, N. Mandal, P. K. Bhowmik, **M.A. Khan** and S. K. Basu

- Publishers:** CABI International 2010. Sustainable Management of rice blast (*Magnaporthe grisea*): 50 years of research progress in molecular biology. Editors: Arya, A.; Perello, A. E. ISBN 978-1-84593-603-7
- 2.
- Title:** Impact of climatic change on flora of high altitude of Pakistan. *In: Climate Change Impacts on High-Altitude Ecosystems.* By Ozturk, M., Hakeem, K.R., Faridah-Hanum, I., Efe, R. (Eds.).
- Authors:** **Muhammad Azim Khan**, Bakhtiar Gul and Haroon Khan
- Publisher:** **Springer** 2015 Pages: 361-381, ISBN 978-3-319-12858-0 (<http://www.springer.com/life+sciences/ecology/book/978-3-319-12858-0>)
- 3.
- Title:** *Role of Arbuscular Mycorrhizal Fungi and Biochar in Remediation of Heavy Metals.* *In: Introduction and Application of Organic Fertilizers: Possibly Shield the Environment.*
- Authors:** Fazli Wahid, Amjad Ali, Munir Ozturk, M. Sharif, **M. Azim Khan** and B. Turkyilmaz Unal **Publisher:** 2018, **Cambridge** Scholars Publishers, UK.
- 4.
- Muhammad Azim Khan, Shakeel Ahmad and A. Raza. 2019. Integrated weed management for agronomic crops. Springer Link. Vol 2: Management practices. Pp- 257-282. https://link.springer.com/chapter/10.1007/978-981-32-9783-8_14
- 5.
- Title:** Weed Management in cotton. *In: Cotton production and uses: Agronomy, crop protection and postharvest technologies.* Springer Nature. Pp. 145-162.
- Authors:** Tariq, M., K. Abdullah, S. Ahmad, G. Abbas, M.H. Rahman and **Muhammad Azim Khan**. 2020.
- Publishers** Springer Nature, Singapore. Pp. 145-162. ISBN 978-981-15-1471-5 ISBN 978-981-15-1472-2 (eBook) <https://doi.org/10.1007/978-981-15-1472-2>.
- 6.
- Title:** Introduction and Application of Organic Fertilizers as Protectors of Our Environment. Role of Arbuscular Mycorrhizal Fungi and Biochar in Remediation of Heavy Metals.
- Authors:** F. Wahid, A. Ali, M. Ozturk, M. Sharif, **Muhammad Azim Khan**, B. Turkyilmaz Unal
- Publisher:** Cambridge Scholars Publishing, Pp 143-181. Copyright © 2022 ISBN (10): 1-5275-8098-9 ISBN (13): 978-1-5275-8098-5
- 7.
- Title:** Sugar Crops
- Authors:** Sami Ullah Khan et al, 2023 Pp 195-211. Principles of Field Crop Production
- Publisher:** Pakistan Agricultural Scientists Forum (**ISBN: 978-969-23717-1-1**) www.pasforum.org

NATIONAL AND INTERNATIONAL PUBLICATIONS OF MUHAMMAD AZIM KHAN

IMPACT FACTOR PUBLICATIONS

2006

1. **Muhammad Azim Khan** and K.B. Marwat. 2006. Impact of crop and weed densities on competition between wheat and *Silybum marianum*. *Pakistan Journal of Botany* 38 (4):1205-1215.

2007

2. K.B. Marwat and **Muhammad Azim Khan**. 2007. Climatic variation and growth of Holy Thistle (*Silybum marianum* Gaertn.). *Pakistan Journal of Botany* 39 (2): 319-327.
3. Marwat, K.B., M. Arif and **Muhammad Azim Khan**. 2007. Effect of tillage and Zn application methods on weeds and yield of maize. *Pakistan Journal of Botany* 39(5): 1583-1591.

2008

4. Arif, M., M.T. Jan, K.B. Marwat and **Muhammad Azim Khan**. 2008. Seed priming improves emergence and yield of soybean. *Pakistan Journal of Botany* 40(3): 1169-1177.
5. K.B. Marwat, **Muhammad Azim Khan**, A. Nawaz and A. Amin. 2008. *Parthenium hysterophorus* L.: A potential source of bioherbicide. *Pakistan Journal of Botany* 40 (5): 1933-1942.

2009

6. **Muhammad Azim Khan**, R.E. Blackshaw and K.B. Marwat. 2009. Biology of Milk thistle and management options for growers in northwest Pakistan. *Weed Biology and Management* 9(2): 99-105.
7. Khan, N.U., G. Hassan, M. B. Kumbhar, K. B. Marwat, **Muhammad Azim Khan**, A. Parveen, Umm-e-Aiman and M. Saeed. 2009. Combining ability analysis to identify suitable parents for heterosis in seed cotton yield, its components and lint % in upland cotton. *Industrial Crops and Products* 29: 108-115.
8. Bakhtiar Gul, K. B. Marwat, G. Hassan, **Muhammad Azim Khan**, S. Hashim and I.A. Khan. 2009. Impact of tillage, plant population and mulches on biological yield of maize. *Pakistan Journal of Botany* 41 (5): 2243-2249.

2010

9. M. Saeed, K.B. Marwat, G. Hassan, **Muhammad Azim Khan** and I.A. Khan. 2010. Interference of horse purslane (*Trianthema portulacastrum* L) with maize (*Zea mays* L.) at different densities. *Pakistan Journal of Botany*. 42(1): 173-179.
10. Mohammad Arfan, Hazrat Amin, Inamullah Khan, **Muhammad Azim Khan**, Nasir Karim, and Fazal-ur-Rehman. 2010. Analgesic and antiinflammatory activity of 11-O-gallobergenin. *Journal of Ethnopharmacology* 131(2): 502-504.
11. Khalid Usman, S. K. Khalil, A. Z. Khan, I. H. Khalil and **Muhammad Azim Khan**. 2010. Tillage and herbicides impact on weed control and wheat yield under rice-wheat cropping system. *Soil and Tillage Research*. 110 (1): 101-107.

2011

12. K.B. Marwat, **Muhammad Azim Khan**, S. Hashim, K. Nawab and A.M. Khattak. 2011. Integrated weed management in wheat. *Pakistan Journal of Botany* 43(1): 625-633.
13. A. M. Khattak, S. Pearson, **Muhammad Azim Khan**, K. Nawab and K. B. Marwat. 2011. The effects of light quality and temperature on the growth and development of geraniums. *Pakistan Journal of Botany* 43(1): 679-688.
14. Khalid Nawab, Amanullah, Paigham Shah, Abdur Rab, Muhammad Arif, **Muhammad Azim Khan**, A. Mateen and F. Munsif. 2011. Impact of integrated nutrient management on growth and grain yield of wheat under irrigated cropping system. *Pakistan Journal of Botany* 43(4): 1943-1947.
15. Khalid Nawab, Amanullah, Muhammad Arif, Paigham Shah, Abdur Rab, **Muhammad**

Azim Khan, M. Anwar Khan and Khalid Khan. 2011. Effect of FYM, potassium and zinc on phenology and grain yield of wheat in rainfed cropping systems. **Pakistan Journal of Botany**, 43(5): 2391-2396.

2012

16. **Muhammad Azim Khan**, K. B. Marwat, A. Amin, A. Nawaz and H. Khan. 2012. Soil solarization: an organic weed management approach in cauliflower. **Communications in Soil Science and Plant Analysis**. 43 (13): 1847-1860.
17. Haroon Khan, K.B. Marwat, G. Hassan and **Muhamad Azim Khan**. 2012. Chemical control of *Parthenium hysterophorus* at different growth stages in non-cropped area. **Pakistan Journal of Botany** 44 (5): 1721-1726.

2013

18. Khan, R., **Muhammad Azim Khan**, S. Sultan, K. B. Marwat, I. Khan, G. Hassan and H. U. Shah. 2013. Nutritional quality of sixteen terrestrial weeds for the formulation of cost-effective animal feed. **The Journal of Animal and Plant Sciences**, 23(1 Suppl.): 75-79.
19. **Muhammad Azim Khan**, S. Kakar, K.B. Marwat and I.A. Khan. 2013. Differential response of *Zea mays* L. in relation to weed control and different macronutrient combinations. **Sains Malaysiana** 42(10): 1395-1401.
20. **Muhammad Azim Khan**, K. B. Marwat, Umm-e-Kulsoom, Z. Hussain, S. Hashim, Abdur Rab and K. Nawab. 2013. Weed control effects on the wheat-pea intercropping. **Pakistan Journal of Botany** 45 (5): 1743-1748.
21. Z. Hussain, K.B. Marwat, **Muhammad Azim Khan**, S. Hashim and T. Bakht. 2013. How the competition of *Xanthium strumarium* L. affects the phenological characters of maize crop. **Pakistan Journal of Botany**, 45(6): 1883-1887.
22. M. A. Shah, S. M. Abdullah, **Muhammad Azim Khan**, H. Amin and Roohullah. 2013. In silico molecular mechanism of cannabigerol as a cyclooxygenase-2 inhibitor. **Bangladesh Journal of Pharmacology** 8: 410-413.

2014

23. M. A. Shah, S. M. Abdullah, **Muhammad Azim Khan**, G. Nasar and I. Saba. 2014. Antibacterial activity of chemical constituents isolated from *Asparagus racemosus*. **Bangladesh Journal of Pharmacology** 9: 1-3.
24. Haroon Khan, K. B. Marwat, **Muhammad Azim Khan** and S. Hashim. 2014. Distribution of *Parthenium* weed in Peshawar Valley, Khyber Pakhtunkhwa- Pakistan. **Pakistan Journal of Botany** 46(1): 81-90.
25. Haroon Khan, K. B. Marwat, **Muhammad Azim Khan** and S. Hashim. 2014. Herbicidal control of *parthenium* weed in maize. **Pakistan Journal of Botany** 46(2): 497-504.
26. Bakhtiar Gul, K.B. Marwat, **Muhammad Azim Khan** and H. Khan. 2014. Impact of tillage, plant population and mulches on phenological characters of maize. **Pakistan Journal of Botany** 46(2): 549-554.
27. Saima Hashim, A. Jan, K.B. Marwat and **Muhammad Azim Khan**. 2014. Phytochemistry and medicinal properties of *Ammi visnaga* (Apiaceae). **Pakistan Journal of Botany** 46(3): 861-867.
28. **Muhammad Azim Khan**, K. B. Marwat, B. Gul, F. Wahid, H. Khan and S. Hashim. 2014. *Pistia stratiotes* L. (Araceae): Phytochemistry, use in medicines, phytoremediation, biogas and management options. **Pakistan Journal of Botany** 46(3): 851-860.
29. M.K. Daud, Lei Mei, N. Ullah, F. Deeba, I. Raza, S. Zhu, **Muhammad Azim Khan** and A. Batool. 2014. In-vitro cadmium-induced alterations in growth and oxidative metabolism of upland cotton (*Gossypium hirsutum* L.). **The Scientific World Journal**. Volume 2014, Article ID 309409, 10 pages <http://dx.doi.org/10.1155/2014/309409>.
30. R. A. Afridi, **Muhammad Azim Khan**, H. Gul and M.K. Daud. 2014. Allelopathic influence of rice extracts on phenology of various crops and weeds. **Pakistan Journal of Botany** 46(4): 1211-1215.
31. Riaz Ahmad Afridi and **Muhammad Azim Khan**. 2014. Reduced herbicide doses in combination with allelopathic plant extracts suppress weeds in wheat. **Pakistan Journal of Botany** 46(6): 2077-2082.

2015

32. Riaz Ahmad Afridi and **Muhammad Azim Khan**. 2015. Comparative effect of water extract of *Parthenium hysterophorus*, *Datura alba*, *Phragmites australis* and *Oryza sativa* on weeds and wheat. **Sains Malaysiana** 44(5): 693-699.
33. Wahid, F., Muhammad S., **Muhammad Azim Khan**, Amjad A, A. M. Khattak and A. R. Saljoqi. 2015. Addition of rock phosphate to different organic fertilizers influences phosphorus uptake and wheat yield. **Ciência e Técnica Vitivinícola Journal**. 30 (3): 90-100.
34. Syed, S., **Muhammad Azim Khan**, M. I. Al-Haq, M. H. Siddiqui, R. Qureshi and Y. Fujii. 2015. *Sarcococca saligna* (Muell.-Arg.) exhibits residual allelopathy. **JoKULL Journal** 65 (7): 46-53.
35. **Muhammad Azim Khan**, F. Wahid, Umme-Kulsoom, K. B. Marwat, B. Gul, M. Inayatullah, A.M. Khattak and S.A. Khan. 2015. Evaluating the threshold levels of *Neslia apiculata* in wheat and its effects on crop yield losses in swat valley of Khyber Pakhtunkhwa. **Pakistan Journal of Botany**. 47(SI): 87-91.
36. Umm-e-Kulsoom and **Muhammad Azim Khan**. 2015. Prediction of grain yield losses in wheat (*Triticum aestivum* L.) under different densities of wild oats (*Avena fatua* L.). **Pakistan Journal of Botany**. 47(SI): 239-242.
37. H. Khan, Adil, B. Gul, **Muhammad Azim Khan**, and K. B. Marwat. 2015. Efficacy of aqueous extracts of different allelopathic plants on germination and growth of wheat and wild oat seeds. **Pakistan Journal of Botany**. 47(SI): 181-185.
38. M. Sharif, Matiullah Khan, **Muhammad Azim Khan**, F. Wahid, K.B. Marwat, A.M. Khattak and M. Naseer. 2015. Effect of rock phosphate and farmyard manure applied with effective microorganisms on the yield and nutrients uptake of wheat and sunflower. **Pakistan Journal of Botany**. 47(SI): 219-226.

2016

39. Shad, A.A., S. Asmat, J. Bakht, S. Jan and **Muhammad Azim Khan**. 2016. Antimicrobial potentials and phytochemical analysis of desert cotton (*A. Javanica*) and flax (*L. Ustitatissimum*). **Pak. J. Pharm. Sci.** 29(3): 861-868.
40. Abbas Ali, **Muhammad Azim Khan**, A. Saleem, K.B. Marwat, A. U. Jan, D. Jan and S. Sattar. 2016. Performance and economics of growing maize under organic and inorganic fertilization and weed management. **Pakistan Journal of Botany** 48(1): 311-318.
41. Shaheen Kashmir, **Muhammad Azim Khan**, A. A. Shad, K.B. Marwat and Haroon Khan. 2016. Temperature and salinity affect the germination and growth of *Silybum marianum* Gaertn and *Avena fatua* L. **Pakistan Journal of Botany** 48(2): 469-476.
42. F. Wahid, M. Sharif, S. Steinkellner, **Muhammad Azim Khan**, K.B. Marwat and S.A. Khan. 2016. Inoculation of arbuscular mycorrhizal fungi and phosphate solubilizing bacteria in the presence of rock phosphate improves phosphorus uptake, growth and colonization of maize. **Pakistan Journal of Botany** 48(2): 739-747.
43. Fazli Wahid, M. Sharif, **Muhammad Azim Khan** and M. Jamal Khan. 2016. Status and phosphorus solubilization potential of Bacteria and Arbuscular mycorrhiza fungi isolated from various locations of Khyber Pakhtunkhwa province. **Pak. J. Botany** 48 (5): 2121-2130.
44. **Muhammad Azim Khan**, R.A. Afridi, S. Hashim, A.M. Khattak, Z. Ahmad, F. Wahid and B.S. Chauhan. 2016. Integrated effect of allelochemicals and herbicides on weed suppression and soil microbial activity in wheat (*Triticum aestivum* L.) **Crop Protection**. 90: 34-39.
45. Khattak, A.M., M. Sajid, H. Z. Sarwar, A. Rab, M. Ahmad and **Muhammad Azim Khan**. 2016. Effect of Sowing Time and Plant Density on the Growth and Production of Roselle (*Hibiscus sabdariffa*). **International Journal of Agriculture & Biology**. 18: 1219-1224.
46. Hussain, Z, **Muhammad Azim Khan**, M. Ilyas, Luqman and I.A. Khan. 2016. Non-chemical weed management in potato at higher elevations. **Applied Ecology and Environmental Research** 14(5): 67-76.

2017

47. M. Iqbal, S.M. Khan, **Muhammad Azim Khan**, Z. Ahmad, Z. Abbas, S. M. Khan, H.J. Chaudhry and M. Saleem. 2017. Distribution pattern and species richness of natural weeds of wheat in varying habitat conditions of district Malakand, Pakistan. **Pakistan Journal of Botany** 49(6): 2371-2382.

2018

48. Iqbal, M., S.M. Khan, **Muhammad Azim Khan**, Z. Ahmad and, H. Ahmad. 2018. A novel approach to phytosociological classification of weeds flora of an agro-ecological system through cluster, two way cluster and indicator species analyses. **Ecological Indicators**. 84: 590-606.
49. M. Ahmad, D. Muhammad, M. Mussarat, M. Naseer, **Muhammad Azim Khan**, A.A. Khan and M.I. Shafi. 2018. Spatial variability pattern and mapping of selected soil properties in hilly areas of Hindukush range northern, Pakistan. **Eurasian J. Soil Sci.** 7 (4) 355 – 364.

2019

50. **Muhammad Azim Khan**, S. Kashmir, H. H. Ali, B. Gul, A. Raza, U. Kulsoom, O. S. Uslu and H. Waheed. 2019. Environmental factors can affect the germination and growth of *Parthenium hysterophorus* and *Rumex crispus*. **Pakistan Journal of Botany** 51(6): 2195-2202.

2020

51. Tasneem ur Rehman, **Muhammad Azim Khan**, H. Khan, W. A. Shah, V. Altay, M. Ozturk. 2020. Tillage, nutrients and weed control affects yield of sugar beet. **Fresenius Environmental Bulletin** 29 (5): 3380-3387.
52. Umme-Kulsoom, **Muhammad Azim Khan**, H.H. Ali and Ali Raza. 2020. Competitive interactions of wild oat (*Avena fatua* L.) with quality and yield of wheat (*Triticum aestivum* L.). **Planta Daninha** 38:e020209694.

2021

53. A. Raza, H.H. Ali, **Muhammad Azim Khan**, M. A. Nadeem¹, M. Awais, M. Kamran, T. Abbas⁵, M. Latif, N. Hamid and O.S. Uslu. 2021. Evaluation of clodinafop-propargyl resistant *Avena fatua* (wild oat) in Sargodha division of Punjab-Pakistan. **Pakistan Journal of Botany**. 53(5): DOI: [http://dx.doi.org/10.30848/PJB2021-5\(28\)](http://dx.doi.org/10.30848/PJB2021-5(28)).

2022

54. M. Fawad, and **Muhammad Azim Khan**. 2022. Impact of irrigation timing and weed management practices on chlorophyll content and morphological traits of tomato (*Solanum lycopersicum* Mill.). **Gesunde Pflanzen**. <https://doi.org/10.1007/s10343-021-00611-0>.
55. M. Fawad, **Muhammad Azim Khan**, F. Wahid, H. Khan, B. Gul, A.M. Khattak, A. Jamal and A. Mastinu. 2022. Irrigation Scheduling and Weed Management: A Sustainable Approach for Managing Broomrape and other Weeds in Tomato Crop. **Horticulturae** 2022, 8, 676. <https://doi.org/10.3390/horticulturae8080676>.
56. Aman Khan, **Muhammad Azim Khan**, F. Wahid, A. Ali, A. M. Khattak, I. Khan, M. Fawad and M. Ahmad. 2022. Weeds as Alternate Organic Fertilizer in Garlic (*Allium sativum* L.) Production. **Gesunde Pflanzen**. <https://doi.org/10.1007/s10343-022-00714-2>.

2024

57. N.H. Khan, **Muhammad Azim Khan**, Attaullah, Z. Bacha, Shafiullah, M. Zamin and A. Ali. Preventing bolting in onion (*Allium cepa* L.) bulb crop; effect of transplanting date and seedling age. **Pak. J. Botany**. OI: [http://dx.doi.org/10.30848/PJB2024-4\(39\)](http://dx.doi.org/10.30848/PJB2024-4(39))
58. Khan, Abdur ; Ahmad, Bashir ; Khan, Maleeha; **Muhammad Azim Khan**; Sultan, Shoaib; Sultana, Kishwar and Hassan, Said. 2024. Production of single cell protein (scp)

from the peels waste of pea, potato and banana by *aspergillus flavus* nr11 21882 as an efficient organic poultry supplement. **ACS Omega**. DOI 10.1021/acsomega.4c03317.

2025

59. Fawad, M., **Muhammad Azim Khan**, A. Jamal, M. Numan, M. F. Saeed, E. Radicetti, and A. Scavo. 2025. Optimizing Weed Control Practices and Irrigation Intervals for Tomato Production in Broomrape-Infested Fields. **ACS Agricultural Science and Technology**. <https://doi.org/10.1021/acscagtech.5c00505>.

2026

60. Muhammad Azim Khan, R. Gamrat, M.T. Khan and M. Fawad. 2026. Ecology, biology and importance of wild safflower (*Carthamus oxyacantha* (M. Bieb). **Pakistan Journal of Botany**, 58(2) March 2026. DOI: [http://dx.doi.org/10.30848/PJB2026-2\(7\)](http://dx.doi.org/10.30848/PJB2026-2(7)).

NATIONAL AND INTERNATIONAL/HEC RECOGNIZED JOURNALS

1. Shah, W.A., J. Bakht, M. Shafi and **Muhammad Azim Khan**. 2001. Forage performance of different cultivars of wheat, oat and barley under rainfed condition. *Pak. J. Biol. Sci.* 4 (Suppl. 5): 516-518.
2. Shah, W.A., J. Bakht, M. Shafi and **Muhammad Azim Khan**. 2002. Yield and yield components of different cultivars of wheat, oat and barley under rainfed condition. *Asian J. Plant Sci.* 1(2):148-150.
3. N. Khan, A. Jan, I. A. Khan, **Muhammad Azim Khan** and Ihsanullah. 2002. Response of wheat cultivars to varying seeding rates under rainfed conditions. *Asian J. Plant Sci.* 1(4):343-345.
4. **Muhammad Azim Khan**, K. B. Marwat, G. Hassan and N. Khan. 2002. Impact of Weed management on maize planted at night. *Pak. J. Weed Sci. Res.* 8(1-2): 57-62.
5. **Muhammad Azim Khan**, G. Hassan, W.A. Shah and M. Z. Afridi. 2002. Duration effect of weed competition on the yield and yield components of wheat. *Sarhad J. Agric.* 18(3): 335-337.
6. **Muhammad Azim Khan**, K.B. Marwat, G. Hassan and W.A. Shah. 2002. Effect of different weed free periods on the growth and yield of wheat. *Pak. J. Agri., Agril. Eng. Vet. Sci.* 18(1-2):30-33.
7. M. Z. Afridi, M.T. Jan, I. Ahmad and **Muhammad Azim Khan**. 2002. Yielding components of canola response to NPK nutrition. *Pak. J. Agron.* 1(4): 133-135.
8. **Muhammad Azim Khan**, K. B. Marwat, N. Khan and I. A. Khan. 2003. Efficacy of different herbicides on the yield and yield components of maize. *Asian J. Plant Sci.* 2(3): 300-304.
9. N. Khan, G. Hassan, **Muhammad Azim Khan** and I. Khan. 2003. Efficacy of different herbicides for controlling weeds in wheat crop at different times of application – I. *Asian J. Plant Sci.* 2(3): 305-309.
10. N. Khan, G. Hassan, K.B. Marwat and **Muhammad Azim Khan**. 2003. Efficacy of different herbicides for controlling weeds in wheat crop at different times of application – II. *Asian J. Plant Sci.* 2(3): 310-313.
11. W. A. Shah, **Muhammad Azim Khan**, N. Khan, M. Anwar Zarkoon and J. Bakht. 2003. Effect of weed management at various growth stages on the yield and yield components of wheat. *Pak. J. Weed Sci. Res.* 9(1-2): 41-48.
12. I. A. Khan, G. Hassan, Ihsanullah and **Muhammad Azim Khan**. 2003. Efficacy of post-emergence herbicides for controlling weeds in canola. *Asian J. Plant Sci.* 2(3): 294-296.
13. M.H. Khan, G. Hassan, N. Khan and **Muhammad Azim Khan**. 2003. Efficacy of different herbicides for controlling broadleaf weeds in wheat. *Asian J. Plant Sci.* 2(3): 254-256.

14. I. Khan, G. Hassan, **Muhammad Azim Khan** and M.I. Khan. 2003. Efficacy of some new herbicidal molecules on weed density and yield components of wheat. Pak. J. Weed Sci. Res. 9 (3-4): 141 – 146.
15. G. Hassan, H. Khan, K.B. Marwat and **Muhammad Azim Khan**. 2003. Studies on weed seed dynamics in soil seed bank of rice-based cropping system of Pakistan. Pak. J. Weed Sci. Res. 9(3-4): 259 – 264.
16. M.A. Zarkoon, N. Khan, W.A. Shah, **Muhammad Azim Khan** and J. Bakht. 2003. Performance of wheat under different weed management practices at various growth stages. Sarhad J. Agric. 19(2): 265-270.
17. **Muhammad Azim Khan**, K.B. Marwat and G. Hassan. 2004. Allelopathic potential of some multi- purpose tree species (MPTS) on the wheat and some of its associated weeds. International J. Biol. Biotech. 1(3): 275-278.
18. N. Khan, I. Khan, **Muhammad Azim Khan** and H. Khan. 2004. Major rabi and Kharif weeds of agronomic crops of district Bannu. Pak. J. Weed Sci. Res. 10(1-2):79-86.
19. Khan, M.D., I.H. Khalil, **Muhammad Azim Khan** and Ikramullah. 2004. Genetic divergence and association for yield and related traits in Mash bean. Sarhad J. Agric. 20 (4): 555-561.
20. Haroon Khan, K. B. Marwat, **Muhammad Azim Khan** and N. Khan. 2004. Distribution and control of broomrape (*Orobanch* sp.) and other major weeds in district Swabi. Pak. J. of Weed Sci. Res. 10(3-4):193-200.
21. **Muhammad Azim Khan**, Naeem Khan and Ikramullah Khan. 2004. *Phragmites australis* (Cav.); A New Invasive Weed in Pakistan. Scientific Khyber 17(2): 169-173.
22. **Muhammad Azim Khan**, K.B. Marwat and G. Hassan. 2005. Wheat yield components as affected due to seed rate and Holy thistle (*Silybum marianum*) density. Pak. J. Weed Sci. Res. 11(3-4): 91-96.
23. **Muhammad Azim Khan**, K.B. Marwat and G. Hassan. 2005. Grain yield of wheat at various seed rates under Holy thistle (*Silybum marianum*) densities. Herbologia 6(3): 25-34.
24. **Muhammad Azim Khan**, K.B. Marwat, G. Hassan and Z. Hussain. 2005. Bioherbicidal effects of tree extracts on seed germination and growth of crops and weeds. Pak. J. Weed Sci. Res. 11(3-4): 89-94.
25. **Muhammad Azim Khan** and K.B. Marwat. 2006. Tillering capacity of wheat at different seed rates as affected by Holy thistle density. Inter. J. Biol. & Biotech. 3(2): 403-406.
26. H. K. Yousafzai, K.B. Marwat and **Muhammad Azim Khan**. 2006. Impact of herbicides on some agronomic and chemical characteristics of flue-cured Virginia (FCV) tobacco. *Songklanakarin Journal of Science and Technology* 28(5): 929-935.
27. M. Arif, **Muhammad Azim Khan**, H. Akbar, Sajjad and S. Ali. 2006. Prospects of wheat as a dual purpose crop and its impact on weeds. Pak. J. Weed Sci. Res. 12(1-2): 13-17.
28. **Muhammad Azim Khan**, K. Nawab, Siraj-ud-Din, N. Hussain and B. Gul. 2006. Allelopathic proclivities of tree leaf extracts on seed germination and growth of wheat and wild oats. Pakistan J. Weed Sci. Res. 12(4): 265-269.
29. J. Bakht, **Muhammad Azim Khan**, S. Anwar and W.A. Shah. 2006. Response of FCV tobacco to various concentrations of two herbicides. Pak. J. Agri., Agril., Engg. Vet. Sci. 22(1):12-16.
30. Khan, M.Z., K. Nawab and **Muhammad Azim Khan**. 2006. Weeds related professional competency of agricultural extension agents in NWFP, Pakistan. Pak. J. Weed Sci. Res. 12(4): 331-337.
31. Waheedullah, **Muhammad Azim Khan**. S. Arifullah and M. Sadiq. 2008. Evaluation of Integrated weed management practices for maize (*Zea mays* L.). Pak. J. Weed Sci. Res. 14(1-2): 19-32.
32. Waheed Ullah, **Muhammad Azim Khan**, M. Sadiq, Habib ur Rehman and A. Nawaz. 2008. Impact of integrated weed management on weeds and yield of maize. Pak. J. Weed Sci. Res. 14(3-4): 141-151.
33. Rashid, H., **Muhammad Azim Khan**, A. Amin, K. Nawab, N. Hussain and P.K.

- Bhowmik. 2008. Effect of *Parthenium hysterophorus* L. root extracts on seed germination and growth of maize and barley. The Americas Journal of Plant Science and Biotechnology 2(2): 51-55.
34. Amin, A., **Muhammad Azim Khan**, G. Hassan, K. B. Marwat, H. Rashid and K. Nawab. 2008. Weed control efficacy and economics of pre-emergence herbicides in maize (*Zea mays* L.). The Asian and Australasian Journal of Plant Science and Biotechnology 2(2):72-75.
 35. G. Hassan, **Muhammad Azim Khan**, K. B. Marwat, A. Nawaz, S. Hashim. 2008. Efficacy of some forest species on extracts on wheat and two major weeds in arid zone in NWFP. Japanese Journal of Plant Science. 2 (2): 39-42.
 36. Khalid Usman, Shad Khan Khalil, Fida Mohammad, **Muhammad Azim Khan** and Amir Zaman Khan. 2009. Weed management in wheat as affected by tillage and herbicides. Pak. J. Weed Sci. Res. 15 (2-3): 155-169.
 37. **Muhammad Azim Khan**, Mahsooma Tariq, Anees Amin, G. Hassan, Muhammad Aslam Khan and Hujjat Ullah Khan. 2009. Possibility of weed suppression by seeding rate and cultivars of wheat. Pak. J. Weed Sci. Res. 15 (4): 209-217.
 38. **Muhammad Azim Khan**, Shafaq Ahsan, Farhatullah, Gul Hassan and Anwar Nawaz. 2009. Weed suppression by higher seeding rate and row spacing of wheat. Pak. J. Weed Sci. Res. 15 (4): 227-236.
 39. Khalid Usman, Liaqat Abbas and **Muhammad Azim Khan**. 2009. Impact of physical and chemical weed control on wheat yield and yield components. Pak. J. Weed Sci. Res. 15 (4): 237-243.
 40. Khalid Usman and **Muhammad Azim Khan**. 2009. Economic evaluation of weed management through tillage, herbicides and hand weeding in irrigated wheat. Pakistan Journal of Weed Science Research 15 (3-4): 199-208.
 41. Hassan, G., I. Khan, **Muhammad Azim Khan**, N.H. Shah, M. Khan and M. Liaquatullah. 2010. Weed flora of chickpea in district Lakki Marwat, NWFP. Sarhad Journal of Agriculture 26 (1): 79-86.
 42. Khalid Usman, S.K. Khalil and **Muhammad Azim Khan**. 2010. Impact of tillage and herbicides on weed density and some physiological traits of wheat under rice-wheat cropping system. Sarhad Journal of Agriculture 26(4): 475-487.
 43. Tahir Ali, A. Mateen Khattak, N.U. Amin and **Muhammad Azim Khan**. 2011. Response of Freesia cultivars to different growing media under Peshawar conditions. Sarhad Journal of Agriculture. 27(1): 43-49.
 44. Khattak, A.M., Dawar, S.H., **Muhammad Azim Khan**, and Razaq, A. 2011. Effect of summer pruning on the quality and performance of rose (*Rosa hybrida*) cultivars. *Sarhad J. Agri.* 27(1): 27-31.
 45. K. Nawab, P. Shah, M. Arif, Amanullah, **Muhammad Azim Khan**, A. Mateen, A. Rab, F. Munsif and K. Ali. 2011. Effect of cropping patterns, farm yard manure, k and zn on wheat growth and grain yield. Sarhad Journal of Agriculture 27(3): 371-375.
 46. Ali, T., Khattak, A.M. and **Muhammad Azim Khan**. 2011. Effect of growing media on the cormelization of freesia under the agro-climatic conditions of Peshawar. Sarhad Journal of Agriculture 27 (1): 33-38.
 47. **Muhammad Azim Khan**, Umm-e-Kalsoom, Muhammad Ishfaq Khan, Rahamdad Khan and Sher Aslam Khan. 2011. Screening the allelopathic potential of various weeds. Pak. J. Weed Sci. Res. 17(1): 73-81.
 48. Kalim-ur-Rahman, Habib-ur-Rahman¹, M. Iqbal, Kalim Ullah, **Muhammad Azim Khan** and Muhammad Sadiq. 2011. Impact of manual weeding interval on onion (*allium cepa* l.) yield and yield components. Pak. J. Weed Sci. Res. 17(3): 277-283.
 49. Habib ur Rahman, Kalim Ullah, M. Sadiq, H.U. Khan, **Muhammad Azim Khan** and A. M. Khattak. 2011. Impact of time of weed removal on garlic (*Allium sativum* L.) yield. Pak. J. Weed Sci. Res. 17(2): 151-159.

50. Sadiq, M., H. Rahman, K. Ullah and **Muhammad Azim Khan**. 2011. Impact of weed management practices on wild onion (*Asphodelus tenuifolius* Cav.) and chickpea (*Cicer arietinum* L.). Pak. J. Weed Sci. Res. 17(2): 135-141.
51. Habib-ur-Rahman, Kalim Ullah, Muhammad Sadiq, Hujat Ullah Khan, **Muhammad Azim Khan** and A. M. Khattak. 2011. Relationship between manual weeds removal timings and garlic (*allium sativum* l.) production. Pak. J. Weed Sci. Res. 17(3): 285-292.
52. Rahamdad Khan, **Muhammad Azim Khan**, Waheedullah, Muhammad Waqas, Abdul Majid Khan, Zahid Hussain, Adres Khan and M.A. Raza. 2011. Allelopathic potential of *Silybum marianum* l. against the seed germination of edible legumes. Pak. J. Weed Sci. Res. 17(3): 293-302.
53. **Muhammad Azim Khan**, A. Nawaz Khan, Rahamdad Khan, Umm-e-Kalsoom and Muhammad Anwar Khan. 2011. Weed control efficiency of intercropping legumes in maize. Pak. J. Weed Sci. Res. 7(4): 303-312.
54. **Muhammad Azim Khan**, K. Ali, Z. Hussain and R.A. Afridi. 2012. Impact of maize-legume intercropping on weeds and maize crop. Pak. J. Weed Sci. Res. 18(1): 127-136.
55. Rahamdad Khan, **Muhammad Azim Khan**, M. Waqas, M. Haroon, Z. Hussain, N. Khan, I. Ullah, M. Ramzan and S. Bashir. 2012. Bioherbicidal activity of some winter weeds against some crops. Pakistan Journal of Weed Science Research. 18(4): 561-569.
56. R. Khan and **Muhammad Azim Khan**. 2012. Weed control efficiency of bioherbicides and their impact on grain yield of wheat (*Triticum aestivum* L.). European Journal of Applied Sciences 4 (5): 216-219.
57. Umm-e-Kalsoom, S. D. Kakar, **M. Azim Khan**, Z. Hussain and Ayub Khan. 2012. Response of maize and three perennial weeds to different combinations of macro-nutrients. Pak. J. Weed Sci. Res. 18(4): 433-443.
58. **Muhammad Azim Khan**, Fazli Wahid and Umm-e-Kulsoom. 2013. To investigate the major weeds of wheat in different agro-ecological zones of Khyber Pakhtunkhwa Pakistan. Pak. J. Weed Sci. Res. 19(1): 59-70.
59. Haroon Khan , K.B. Marwat, G. Hassan and **Muhammad Azim Khan**. 2013. Socio-economic impacts of parthenium (*Parthenium hysterophorus* L.) in Peshawar valley, Pakistan. Pak. J. Weed Sci. Res., 19(3): 275- 293, 2013.
60. Riaz Ahmad Afridi, **Muhammad Azim Khan**, Z. Hussain, S. Saleem, S. Khan, K. Afridi and Muhammad Ali. 2013. Allelopathic effects of rice straw extract on different crops and weeds. ARPN Journal of Agricultural and Biological Science. 8(5): 411-418.
61. Rehmat Ullah, Kalim Ullah, **Muhammad Azim Khan**, Imdad Ullah and Z. Usman. 2014. Summer weeds flora of district Dera Ismail Khan Khyber Pakhtunkhwa, Pakistan. Pakistan Journal of Weed Science Research. 20(4): 505-517.
62. Muhammad Iqbal, S. Khan, **Muhammad Azim Khan**, Inayat ur Rahman, Z. Abbas and Zahidullah. 2015. Exploration and inventorying of weeds in wheat crop of the district Malakand, Pakistan. Pak. J. Weed Sci. Res. 21(3): 435-452.
63. M. Fawad, H. Khan, B. Gul, **Muhammad Azim Khan** and K.B. Marwat. 2015. Comparative effect of herbicidal and non-chemical control methods against water hyacinth. Pak. J. Weed Sci. Res. 21(4): 593-605.
64. Waris, A., L. Waris, **Muhammad Azim Khan** and A.A. Shad. 2016. Allelopathic Effect of Methanol and Water Extracts of *Camellia sinensis* L. on seed germination and growth of *Triticum aestivum* L. and *Zea mays* L. Journal of Bioresource Management, 3 (1): 1-11.
65. R.Khan, **Muhammad Azim Khan**, S. Shah, S. Uddin, S.Ali and M. Ilyas. 2016. Bioherbicidal potential of plant extracts against weeds of wheat crop under agro-climatic conditions of Peshawar-Pakistan. Pak. J. Weed Sci. Res., 22(2): 285-294.
66. Wajidullah, N. Akhtar, S.S. Ali, S. Ahmed, S. Jan, Barkatullah, **Muhammad Azim Khan** and M.S. Khan. 2017. Phytochemical analysis of *Lepidium didymium*. Pak. J. Weed Sci. Res. 23(2):155-164.
67. Omer Suha Uslu, Osman G., A. R. Kaya, A. Erol, **Muhammad Azim Khan**, M. N. Taşsever, E. Turkkaya. 2018. Allelopathic effects of flower extract of oleander (*Nerium*

- oleander*) on the germination of seed and seedling growth of *Lolium multiflorum*. İğdir Üni. Fen Bilimleri Enst. Der. / *İğdir Univ. J. Inst. Sci. & Tech.* 8(1): 309-317.
68. **Muhammad Azim Khan**, M. Khan and O.S. Uslu. 2019. *Caralluma tuberculata* - An important medicinal plant to be conserved. *Biological Diversity and Conservation*. 12(1): 189-196.
 69. Rashid H.U., D. Muhammad, **Muhammad Azim Khan**, M. Arif, N. Tahir, M. Zamin, R. A. Afridi, M.T. Azeem and Farooq Azam. 2020. Impact of integrated weed management in maize on weed density, biological yield and soil physicochemical properties. *International Journal of Biosciences* 16(5): 232-244.
 70. M.A. Nadeem, B.A. Khan, S. Afzal, **Muhammad Azim Khan**, T. Abbas, M.M. Javaid, M.M. Amin, N. Farooq and A. Aziz. 2020. Effect of aqueous extract of *Carthamus tinctorius* L. on germination and initial seedling growth of *Oryza punctata* L. *Pak. J. Weed Sci. Res.*, 26(3): 331-342.
 71. I. Khan, M. Kabir, M.I. Khan, H. Khan, S.Hashim and **Muhammad Azim Khan**. 2021. Effect of sowing pattern and herbicides application on weed management in wheat crop. *Pak. J. Weed Sci. Res.* 27(1): 67-78.
 72. **Muhammad Azim Khan**, Hashmatullah, M. Fawad, A. Khan, T.Z. Chohan, S. Hashim and Habib Ullah. 2022. Domestication and conservation of endangered medicinal plants at two agro-ecological zones of Pakistan. *Pak. J. Weed Sci. Res.*, 28(2): 92-104.
 73. M. Younas, K. Hussain, A. Ghaffar, M. Atiq, N. Hussain, W. Abbas, **Muhammad Azim Khan**, M. Nadeem, M. Irshad, N. A. Khan and M. Zubair. 2022. Assessment of Genetic Variability in Onion against Purple Leaf Blotch Disease under Field Conditions and its Management. *Sarhad Journal of Agriculture*. 38(4): 1273-1278. DOI | <https://dx.doi.org/10.17582/journal.sja/2022/38.4.1273.1278>.
 74. Khan, A.S., **Muhammad Azim Khan**, M. Fawad and M. Sadiq. 2022. Utilizing weeds as a source of organic fertilizer for improving okra (*Abelmoschus esculentus* L.) yield attributes. *Pak. J. Weed Sci. Res.*, 28(4): 447-456, 2022. DOI 10.28941/pjwsr. v28i4.1097
 75. S. Hashim, S. Ayub, A. Jan, M. Israr, **Muhammad Azim Khan** and M. Fawad. 2022. Medicinal properties, phytochemistry and pharmacology of *Acacia modesta* (Wall.) Hurter. *Pakistan Journal of Weed Science Research* 28(3): 269-282.
 76. Afridi, R.A., M Ali, .M Israr, S. Hashim, **Muhammad Azim Khan**. 2022. Possible utilization of allelochemicals as a natural herbicide for weeds control and optimum growth of wheat crop. *Pakistan Journal of Weed Science Research*. 28(3): 179-190.
 77. Khan, I., B. Ahmad, A.R. Saljoqi, S.A. Khan, J. Khan and **Muhammad Azim Khan**. 2023. Population trend of sugarcane leafhopper *Pyrilla perpusilla* on different sugarcane varieties with biotic and abiotic factors. *Sarhad Journal of Agriculture*, 39(2): 495-509.
 78. M. Waris, **Muhammad Azim Khan**, M. Fawad, N. Jafer, R. Hussain and Haseeb Ahmad. 2024. Allelopathic Effect of *Moringa oleifera* L. Aqueous extract on the germination and seedling growth of okra (*Abelmoschus esculentus* L.). *Pakistan Journal of Weed Science Research*, 30(3): 121-130. DOI | <https://dx.doi.org/10.17582/journal.PJWSR/2024/30.3.121.130>
 79. **Muhammad Azim Khan**, M. Fawad, A. Jamal, A. Ali and R. Ahmad. 2025. Influence of varying salinity on germination indices and threshold of salt tolerance in Alfalfa (*Medicago sativa* L.). *Sarhad Journal of Agriculture*. 41(2): 528-537. DOI <https://dx.doi.org/10.17582/journal.sja/2025/41.2.528.537>
 80. R.A. Afridi, **Muhammad Azim Khan**, M. Khalid, S. Asghar, et al. 2025. Allelochemicals as bio-herbicides for weed management in wheat. *Jammu Kashmir J. Agri.* 05 (03): 317-327. DOI: 10.56810/jkjagri.005.03.0271