

CURRICULUM VITAE



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Department of Agronomy,
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RESEARCH FOCUS

Crops' eco-physiology particularly the study of adaptive mechanisms in crop plants under the water, heat and light stress conditions. Remote sensing techniques for the evaluation of crop performance under Abiotic stresses. Crop and soil management under the varying environmental conditions for improved biomass production.

LANGUAGES

English	Speaking, reading and writing
Urdu	Speaking, reading and writing
Pashto	Speaking only (Mother tongue)
Japanese	Communication only

EDUCATION

Post Doctorate (2016) – sponsored by Endeavour, Australia

ARC Centre of Excellence in Plant Energy Biology, Division of Plant Sciences, Research School of Biology, The Australian National University, Australia. Research conducted on linking high-throughput analyses of leaf respiration to hyperspectral characterization (non-invasive imaging approach) of leaf traits for screening genetic variants in energy use efficiency among the diverse lines of wheat.

Advisor: Prof. Dr. Owen K. Atkin.

Ph.D. (2007 – 2010) – sponsored by MEXT, Japan

Laboratory of Crop Sciences, Graduate School of Horticulture, Chiba University, Japan. Research conducted on the adaptive mechanisms for stresses in terms of chlorophyll fluorescence parameters in cotton, peanut and rice. Remote sensing techniques for the evaluation of crop performance under drought were also studied. *Advisor: Prof. Dr. Akihiro Isoda.*

Master of Science (Honours) (2001 – 2003)

Department of Agronomy, The University of Agriculture, Peshawar, Pakistan. Worked on the evaluation of cereal varieties/lines for biomass production under rainfed and irrigated conditions supplied with different potash-levels.

Advisor: Prof. Dr. Paigham Shah.

Bachelor of Science (Honours) (1997 – 2001)

Department of Agronomy, The University of Agriculture, Peshawar, Pakistan. Studied the department of Agronomy specialization courses and conducted researches on maize planting geometry and tobacco NPK levels. *Advisor: Prof. Sherin Khan.*

Higher Secondary School Certificate (1994 – 1996)

Higher Secondary School Certificate from Board of Intermediate and Secondary Education, Peshawar, Pakistan. (Pre-Medical Group, 1st division)

Secondary School Certificate (1994)

Secondary School Certificate from Board of Intermediate and Secondary Education, Peshawar, Pakistan. (Science Group, 1st division)

ACADEMIC DISTINCTIONS AND AWARDS

- **Endeavour Postdoctoral Research Fellowship**, awarded by Govt. of Australia
- **MEXT Scholarship for PhD**, awarded by the Govt. of Japan. (2006-2010)
- **University Gold Medal** for obtaining 1st position amongst all the successful candidates of the **M.Sc. (Hons)** for academic session 2001-2003. (CGPA: 4.00/4.00)
- **University Silver Medal** for obtaining 2nd position amongst all the successful candidates of the **B.Sc. (Hons)** for academic session 1998-2001. (CGPA: 3.91/4.00)

EMPLOYMENT / PROFESSIONAL EXPERIENCE

<u>POSITION</u>	<u>ORGANIZATION</u>	<u>PERIOD</u>
Assistant Professor (TTS/BS-19)	Department of Agronomy, Faculty of Crop Production Sciences, The University of Agriculture, Peshawar, Khyber Pakhtunkhwa, Pakistan	23/04/2011 ~ to date
Lecturer (BS-18)	Department of Agronomy, Faculty of Crop Production Sciences, The University of Agriculture, Peshawar, Khyber Pakhtunkhwa, Pakistan	19/01/2005 ~ 22/04/2011
ACSS / TL / Branch Incharge	Khushhalibank Pakistan (Pishin ~ Zhob Branch)	01/09/2003 ~ 18/01/2005
Research Associate	Department of Agronomy, FCPS, The University of Agriculture, Pakistan	31/08/2003 ~ 1/04/2001

PROFESSIONAL COURSES OFFERED/TAUGHT

- Agr-701, 4(3-2): Advance Agronomy, PhD
 - Agr-704, 3(3-0): Agro-Environment Conservation, PhD
 - Agr-719, 4(3-2): Modern Concepts of Crop Production, PhD
 - Agr-608, 4(3-2): Principles of Weed Science, M. Sc. (Hons)
 - Agr-601, 4(3-2): Sugar Crops, B. Sc. (Hons)
 - Agr-515, 3(2-2): Biological Nitrogen Fixation, B. Sc. (Hons)
 - Agr-510, 3(2-2): Plant Nutrients and Growth Regulators, B. Sc. (Hons)
 - Agr-501, 4(3-2): Agro-technology of Major Crops, B. Sc. (Hons)
 - Agr-411, 3(2-2): General Crop Production, B. Sc. (Hons)
 - Agr-401, 3(2-2): Plant Physiology, B. Sc. (Hons)
 - Agr-301, 3(2-2): Basic Agriculture, B. Sc. (Hons)
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Ph.D., M.Sc.(H) and B.Sc.(H) STUDENT(s): Supervised + under Supervision = Total

Ph.D. (Hons) Students supervised:	0	+	2	=	2
*M.Sc. (Hons) Students supervised:	14	+	4	=	18
B.Sc. (Hons) Students supervised:	16	+	4	=	20

<u>S.No.</u>	<u>Name of Scholar</u>	<u>*M.Sc. (Hons) Thesis Research Topic</u>	<u>Status</u>
01.	Ghufran Ghani (2011~12)	Effect of phosphorous and zinc on the growth and yield of maize	Degree awarded
02.	Arshad Ali (2011~12)	Response of wheat to different levels of phosphorus, zinc and humic acid	Degree awarded
03.	Sajid Ali (2012~13)	Response of maize to phosphorus, foliar application of zinc and its time of application	Degree awarded
04.	Abdul Qadoos (2013~14)	Response of wheat to zinc and phosphorus levels	Degree awarded
05.	Ali Shan (2013~14)	Response of wheat to foliar application of zinc and its application timing	Degree awarded
06.	Rayyan Khan (2014~15)	Zinc fertilization at different growth stages for the improvement of wheat yield and yield components	Degree awarded
07.	Manzoor (2014~15)	Management of nitrogen and sulfur for the improvement of sesame (<i>Sesamum indicum</i> L.) yield and quality	Degree awarded
08.	Haq Nawaz (2014~15)	Efficacy of wheat varieties towards successive delayed sowing under rainfed condition in dir (L)	Degree awarded
09.	Moin Ullah (2015~16)	Integrated weed management and application timing on weed control and wheat productivity	Degree awarded
10.	Arshad Jalal (2015~16)	Biofortification of wheat with zinc and iron for higher wheat productivity	Degree awarded
11.	Jan e Alam (2017~18)	Influence of phosphatic fertilizers and farmyard manure on yield and yield components of wheat	Degree awarded

12.	Tauqir Islam (2017~18)	Evaluation of phosphate solubilizing bacterial potential for sustainable production of wheat under phosphorus levels	Degree awarded
13.	Sayyad Khan (2017~18)	Influence of nitrogen and potash levels on barley genotypes in rainfed condition	Degree awarded
14.	Hashim Khan (2017~18)	yield and quality of wheat as affected by foliar boron application at various growth stages	Degree awarded

CONFERENCE(S), WORKSHOP(S) & TRAINING(S) ORGANIZED / ATTENDED

1. International conference organized on *Strategies for Ensuring Food Security in the Changing Climate*. Department of Agronomy, The University of Agriculture, Peshawar, Pakistan. 23 – 24 Oct., 2019.
2. Training workshop attended on *Plant Tissue Culture Techniques*. Institute of Biotechnology and Genetic Engineering, The University of Agriculture, Peshawar, Pakistan. 25 – 26 Apr., 2019.
3. National workshop attended on *Developing Research Skills and Data Management*. Abdul Wali Khan University Mardan, Pakistan. 04 – 05 Apr., 2019.
4. Workshop attended on *Integration of ICT in Agriculture and Applied Research*. The University of Agriculture, Peshawar, Pakistan. 21st Feb., 2019.
5. Training organized on *Mushroom cultivation and spawn production Technology*. Department of Plant Pathology, The University of Agriculture, Peshawar, Pakistan. 06 – 08 Feb., 2019.
6. National conference organized on *Agricultural Problems & Food Security in the Changing Climate*. The University of Agriculture, Peshawar, Pakistan. 14 – 17 Nov., 2018.
7. 1st National workshop attended on *Molecular Biology Tools & Techniques*. Department of Botany, The University of Malakand, Pakistan. 12 – 14 Nov., 2018.
8. Training workshop attended on *Multi-agency Collaboration for Disaster Management in Pakistan*. The University of Peshawar, Pakistan. 17th Oct., 2018.
9. International conference attended on *Climate Smart Agriculture: The Way of Farming for 21st Century*. Department of Agronomy, MNS University of Agriculture, Multan, Pakistan. 08 – 09 Oct., 2018.

10. International conference organized on *Biofortification of Staple Food Crops*. The University of Agriculture Peshawar, Pakistan and Higher Education Commission of Pakistan. 24 – 26 Sep., 2018.
11. International conference attended on *Climate Change Impacts on Agriculture and Food Supply*. Department of Agriculture, University of Swabi, Pakistan. 24 – 26 Apr., 2018.
12. National conference organized on *Climate Smart Agriculture and Crop Modeling*. Department of Agronomy, The University of Agriculture Peshawar, Pakistan. 18 – 19 Apr., 2018.
13. Training on *Mushroom cultivation and spawn production*. Department of Plant Pathology, The University of Agriculture, Peshawar, Pakistan. 26 – 29 December, 2017.
14. International conference attended on *Climate Change Threats to Agriculture and Food Security: THINK-ADAPT*. Department of Agronomy and Climate Change Centre, The University of Agriculture, Peshawar, Pakistan. 22 – 24 Nov., 2017.
15. Training course attended on *Managing Forests in the Context of Climate Change & REDD+*. Pakistan Forest Institute in collaboration with Green Pakistan Programme. 24 – 27 Oct., 2017.
16. Training workshop attended on *How to write a worth publishing research paper/thesis*. The University of Agriculture, Peshawar in collaboration with Pakistan Scientific and Technological Information Centre (PASTIC). 18 – 19 Oct., 2017.
17. International conference attended on *Innovations in Agriculture*. The University of Agriculture, Peshawar in collaboration with Pakistan Science Foundation, Islamabad. 28 – 29 Mar., 2017.
18. Seminar attended on *Organic Farming – Clean Food*. The University of Agriculture, Peshawar, Pakistan in collaboration with Sadiq Poultry (Pvt.) Limited. 26th December, 2016.
19. AgMIP Mid Term Workshop Phase II & Hands on training of TOA-MD (TradeOff Analysis for Multi-Dimensional Impact Assessment) attended on *Assessing Climatic Vulnerability and Projecting Crop Productivity using Integrated Crop and Economic Modeling Techniques*. University of Agriculture, Faisalabad, Pakistan. 20 – 22 Dec., 2016.
20. Training workshop attended on *Intellectual Property Rights (Drafting and Filing of Patent Application)*. The University of Agriculture, Peshawar, Pakistan in collaboration with Pakistan Scientific & Technological

- Information Centre and Directorate of Science & Technology. 16th December, 2016.
21. Oral presentation on “Non-invasive hyperspectral imaging approach for screening genetic variants in energy use efficiency among the diverse lines of wheat. Research School of Biology, Australian National University, Canberra, Australia. 23rd May, 2016.
 22. Poster presentation on “linking high-throughput analyses of leaf respiration to hyperspectral characterization of leaf traits in wheat” in the *ARC Centre of Excellence in Plant Energy Biology 2016 Retreat*, La Trobe University, Melbourne, Australia. 9th ~ 12th May, 2016.
 23. Lecture on the *Evolution of C4 Photosynthesis* by Dr Rowan Sage’s in *C4 Photosynthesis Conference 2016: Past, Present and Future*. Australian Research Centre, Canberra, Australia. 12th April, 2016.
 24. Training course on *Gene Technology Practices*. Research School of Biology, The Australian National University, Canberra, Australia. April, 2016.
 25. Training workshop organized on *Getting Ready for Foreign Scholarships*. The University of Agriculture, Peshawar, Pakistan. 26th September, 2014.
 26. Training Course attended on *Agricultural Techniques of Hybrid Cotton for Asian Countries*. Anhui Institute of International Business, Hefei, Anhui, China. 1 – 30 August, 2014.
 27. National Seminar organized on the *Exploitation of Plants’ Oil for Direct Use as Biodiesel in the Changing Climate of Pakistan*. The University of Agriculture, Peshawar, Pakistan. 19th June, 2014.
 28. Training workshop organized on *How to write a worth publishing research paper/thesis*. The University of Agriculture, Peshawar, Pakistan. 3 – 4 April, 2014.
 29. International Workshop on *Biochar in Pakistan: Opportunities and Potential. Biochar for Climate-Friendly Agriculture: Shifting Paradigms towards Higher-Precision and Efficiency*. University of Agriculture, Faisalabad, Pakistan. 24 – 27 Mar., 2014.
 30. Training workshop organized on *Data Analysis Techniques for Crop, Animal and Social Sciences*. The University of Agriculture, Peshawar, Pakistan. 6 Feb., 2014.
 31. Mid Term Workshop & International Seminar on *Climate Change Adaptation Strategies to Ensure Food Security*. University of Agriculture, Faisalabad, Pakistan. 16 – 17 Jan., 2014.

32. National Conference on *Prospects and Opportunities for Agricultural Development in Pakistan*. University of Haripur, Khyber Pakhtunkhwa, Pakistan. 25 – 27 June, 2013.
33. *AgMIP-Pakistan Kickoff Workshop & International Seminar on Climate Change*. University of Agriculture, Faisalabad, Pakistan. 4 – 6 June, 2013.
34. International Conference on *Sustainable Crop Productivity: Threats and Options*. Pakistan Society of Agronomy in collaboration with Ayub Agricultural Research Institute, Faisalabad, Pakistan. 11 – 12 April, 2013.
35. Training Workshop on Field Layout and Statistical *Data Analysis Techniques*. Nuclear Institute for food and Agriculture (NIFA), Peshawar, Khyber Pakhtunkhwa, Pakistan. 25 – 27 Sep., 2012.
36. 4th International Weed Science Conference on *Vegetation Management in 21st Century*. Weed Science Society of Pakistan and Department of Weed Science, The University of Agriculture, Peshawar, Khyber Pakhtunkhwa, Pakistan. 06 – 08 Sep., 2012.
37. Cascading of AIT Based Training Program on *Ensuring Training Effectiveness*. Higher Education Commission of Pakistan in collaboration with The Agricultural University, Peshawar, Pakistan. 04 – 06 Jul., 2012.
38. International Conference on *Climate Change: A Challenge for Agriculturist*. The University of Agriculture, Peshawar, Khyber Pakhtunkhwa, Pakistan. 28 – 30 May, 2012.
39. National Conference on *Recent Trends in Agronomic Strategies for Further Green Revolution*. Pakistan Society of Agronomy and Department of Agronomy, The University of Agriculture, Peshawar, Khyber Pakhtunkhwa, Pakistan. 2 – 3 May, 2012.
40. National Conference on *Cultivation of Medicinal and Aromatic Plants Adopted at Khyber Pakhtunkhwa Conditions*. Department of Agronomy, The University of Agriculture, Peshawar, Khyber Pakhtunkhwa, Pakistan. 6 Feb., 2012.
41. Symposium on the *Institutional Linkages for Agriculture Development in Pakistan*. The University of Agriculture, Peshawar, Khyber Pakhtunkhwa, Pakistan. 20 – 21 Dec., 2011.
42. Training workshop on *Higher Education Quality Assessment*. Quality Enhancement Cell, The University of Agriculture, Peshawar, Khyber Pakhtunkhwa, Pakistan. 13 Dec., 2011.
43. Workshop on *Climate Change Adaptation*. The Livelihood Programme, (P&DD, SDC, Inter-Cooperation), Pakistan. 23 – 25 Nov., 2011.

44. Training on *Livelihood Environment and Sustainable Development* at Pakistan Academy for Rural Development, Peshawar, Khyber Pakhtunkhwa, Pakistan. 05 – 10 Sep., 2011.
45. 3rd International Weed Science Congress on *Vegetation Management and Agro-Biodiversity: trends and implications*. Weed Science Society of Pakistan and Department of Weed Science, The University of Agriculture, Peshawar, Khyber Pakhtunkhwa, Pakistan. 18 – 20 Apr., 2011.
46. International Symposium on *Institutional Linkages for Agriculture Development in Pakistan*. Higher Education Commission and Department of Agronomy, The University of Agriculture, Peshawar, Khyber Pakhtunkhwa, Pakistan. 20 – 21 Dec., 2010.
47. Workshop on the *Development of Sustainable and Collaborative Research Networks*. Department of Agronomy, The University of Agriculture, Peshawar, Khyber Pakhtunkhwa, Pakistan. 29 – 30 Sep., 2010.
48. Shahenshah and Isoda, A. 2008. Effects of water stress on leaf temperature and chlorophyll fluorescence parameters in cotton and peanut. Poster presentation, Graduate School of Horticulture, Chiba University, Japan. 25 Nov., 2008.
49. International Symposium on *Water in Agriculture and Forestry: Challenges, Technological Solutions and Innovations*. Institute of Environment and Sustainable Development in Agriculture (IEDA), Chinese Academy of Agricultural Sciences (CAAS), Beijing, China. 20 – 25 Oct., 2008.
50. 1st International Workshop on *Agriculture Research and Methodology*. Department of Agronomy, The University of Agriculture, Peshawar, Khyber Pakhtunkhwa, Pakistan. 6 – 8 Apr., 2005.

REVIEWER AND MEMBER OF SCIENTIFIC SOCIETIES

- National Reviewer of the *Pakistan Journal of Weed Science Research*, Pakistan
 - National Reviewer of *Sarhad Journal of Agriculture*, Pakistan
 - Life Member of *Pakistan Society of Agronomy*
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PEER-REVIEWED PUBLICATIONS

1. Khan, M. O., M. J. Khan, M. O. Khan, M. Shafi, S. Anwar, A. A. Khan, **ShahenShah**. 2019. Wheat yield as affected by sources of sulfur and its time of application. *International Journal of Bioscience*. 5(6): 37 – 50.
2. Ali, S., X. Ma, Q. Jia, I. Ahmad, S. Ahmad, Z. Sha, B. Yun, A. Muhammad, X. Ren, **ShahenShah**, H. Akbar, T. Cai, J. Zhang, and Z. Jia. 2019. Supplemental irrigation strategy for improving grain filling, economic return, and production in winter wheat under the ridge and furrow rainwater harvesting system. *Agricultural Water Management*. 226: 1 – 10.
<https://doi.org/10.1016/j.agwat.2019.105842>
3. Iqbal, A., R.S. Khan, K. Shehryar, A. Imran, F. Ali, S. Attia, **ShahenShah**, M. Mii. 2019. Antimicrobial peptides as effective tools for enhanced disease resistance in plants. *Plant Cell, Tissue and Organ Culture*. 139(1): 1 – 15.
<https://doi.org/10.1007/s11240-019-01668-6>
4. Zamin, M. A. M. Khattak, A. M. Salim, K. B. Marcum, M. Shakur, **ShahenShah**, I. Jan, and S. Fahad. 2019. Performance of *Aeluropus lagopoides* (mangrove grass) ecotypes, a potential turfgrass, under high saline conditions. *Environmental Science and Pollution Research*, 26(13): 13410 – 13421.
<https://doi.org/10.1007/s11356-019-04838-3>
5. Coast, O., **ShahenShah**, A. Ivakov, et al. 2019. Predicting dark respiration rates of wheat leaves from hyperspectral reflectance. *Plant Cell & Environment*, 42(7): 2133 – 2150. <https://doi.org/10.1111/pce.13544>
6. Basir, A., A. Tahir, K. Afridi, S. Fahad, Z. Ahmad, M. Adnan, M. Alam, **ShahenShah**, A. Khan, F. Wahid, M. Ibrahim, I. Rahman, M.A. Khan, and R. Ali. 2018. Optimization of sowing time and seed rate can enhance wheat yield in semi-arid environment. *The Philippine Agricultural Scientist*, 101(4): 326 – 332.
7. **ShahenShah**, M. Hussain, A. Jalal, M. S. Khan, T. Shah, M. Ilyas, and M. Uzair. 2018. Nitrogen and sulfur rates and timing effects on phenology, biomass yield and economics of wheat. *Sarhad Journal of Agriculture*, 34(3): 671 – 679.
8. Khan, H., R. Gul, N. U. Khan, R. Naz, **ShahenShah**, N. Asim, and A. Latif. 2018. Role of selection indices in ascertaining high yielding drought stress tolerant chickpea (*Cicer arietinum* L.). *The Journal of Animal and Plant Sciences*, 28(1): 146 – 154.
9. Gul, R., H. Khan, **ShahenShah**, N.U. Khan, N. Asim, A. Latif, and K. Harada. 2018. Characterization for nodulation and detection of duplicate gene action of dominant epistasis controlling root nodulation in chickpea (*Cicer arietinum* L.). *International Journal of Agriculture and Biology*, 20: 683 – 688.

10. Zamin, M., A.M. Khattak, M.A.S. Alyafei, M. Sajid, M. Shakur, **ShahenShah**, I. Khan, H. Rashid, and Shafiulla. 2018. Sporobolus spicatus, a potential turf grass under the climatic conditions of United Arab Emirates. *Journal of Scientific Agriculture*, 2: 1 – 8.
11. Iqbal, A., **ShahenShah**, M. Nisar, and A. Ghafoor. 2017. Morphological characterization and selection for high yielding and powdery mildew resistant pea (*Pisum sativum*) lines. *Sains Malaysiana*, 46(10): 1727 – 1734.
12. Moinullah, **ShahenShah**, A. Jalal, T. Shah, W. Ahmad, and A. A. Khan. 2017. Integrated herbicides application at different timing for weed management and wheat productivity. *Pakistan Journal Weed Science Research*, 23 (4): 387 – 396.
13. Nawaz, H., **ShahenShah**, A. Rab, H. Fayyaz, H. Raza, H. Khan, T. Jan, I. Ali, G. Sadiq, F. Khan, and S. J. Ahmad. 2017. Response of wheat cultivars toward successive delayed sowing under rainfed condition in Lower Dir. *Pure Applied Biology*, 6(2): 470 – 480.
14. Muhmmad, Z., G. Ahmad, B. Iqbal, Subhanullah, R. A. Khan, A. Bari, and **Shahenshah**. 2016. Effect of fertilizer dose on the performance of spring cereals. *Pure Appl. Biol.*, 5(3): 458 – 463.
15. **Shahenshah**, G. Ghani, H. Khan, M. Arif, A. Qahar, Inamullah, A. Ali, and M. Ahmad. 2015. Response of maize cultivars to phosphorus and zinc nutrition. *Pakistan Journal of Botany*, 47(SI): 289 – 292.
16. Shafi, M., R. Zaman, J. Bakht, Y. Hayat, and **Shahenshah**. 2015. Dry matter partitioning and grain yield of wheat as affected by phosphorus and its application methods. *Pakistan Journal of Botany*, 47(SI): 281 – 287.
17. Ali, K., M. Arif, **Shahenshah**, Z. Hussain, A. Ali, S. Munir, and H. Sher. 2015. Effect of organic and inorganic nutrients sources on phenology and growth of wheat. *Pakistan Journal of Botany*, 47(6): 2215 – 2222.
18. Azeem, K., **Shahenshah**, N. Ahmad, S. T. Shah, F. Khan, Y. Arafat, F. Naz, I. Azeem, and M. Ilyas. 2015. Physiological indices, biomass and economic yield of maize influenced by humic acid and nitrogen levels. *Russian Agricultural Science*, 41 (2–3): 115–119.
19. Khan, A. A., Inamullah, M. T. Jan, **Shahenshah**, and H. Akbar. 2015. Level and application method of nitrogen and potassium affect grain yield and quality of wheat. *Basic Research Journal of Agricultural Science & Review*, 4 (2): 56-63.
20. Khan, A. A., M. N. Khan, Inamuallah, **Shahenshah**, I. R. Arshad, I. Muhammad, and A. Zeb. 2015. Effect of potash application on growth, yield and yield components of spring maize hybrids. *Pure & Applied Biology*, 4: 195-203.


21. Amanullah, S. F. Bashir, A. Qahar, **Shahenshah**, B. Ahmad, and A. Iqbal. 2015. Interactive effects of nitrogen and sulfur on growth, dry matter partitioning and yield of maize. *Pure & Applied Biology*, 4: 164-170.
22. Ali, S., S. Din, O. Ullah, **Shahenshah**, S. Din, T. Ali, and I. Din. 2015. Yield and yield components of maize response to compost and fertilizer-nitrogen. *Food Science & Quality Management*, 38: 39-44.
23. Ali, S., S. Din, O. Ullah, **Shahenshah**, H. Khan, S. Din, R. Khan, and T. Ali. 2015. Maize response to compost, nitrogen and its method of application at Peshawar, *Journal of Natural Science Research*, 5: 164-170.
24. Amanullah, **Shahenshah**, Z. Shah, S. K. Khalil, A. Jan, M. T. Jan, M. afzal, H. Akbar, H. Khan, H. Rahman, K. Nawab, Farhatullah, F. Muhammad, Z. Hussain, K. M. Kakar, and I. Khan. 2014. Effect of variable nitrogen source and rate on leaf area index and total dry matter accumulation in maize (*Zea mays* L.) genotypes under calcareous soil. *Turkish Journal Field Crops*, 19 (2): 276-284.
25. Munsif, F., **Shahenshah**, A. L. Samuel, M. Amin, A. Shan, A. Ahmad, and Z. Ali. 2014. Integration of weeds control methods with seed rates for improving wheat yield. *Pakistan Journal Weed Science Research*, 20 (2): 155-165.
26. Azeem, K., S. K. Khalil, F. Khan, **Shahenshah**, A. Qahar, M. Sharif, and M. Zamin. 2014. Phenology, yield and yield components of maize as affected by humic acid and nitrogen. *Journal of Agricultural Sciences*, 6 (7): 286-293.
27. Naveed, K., M. A. Khan, M. S. Baloch, K. Ali, M. A. Nadim, E. A. Khan, **Shahenshah**, and M. Arif. 2014. Effect of different seeding rates on yield attributes of dual-purpose wheat. *Sarhad Journal of Agriculture*, 30(1): 83-91.
28. Ali N., D. Ahmad, J. Bakht, **Shahenshah**, Farmanullah, and M. Rehman. 2013. Antimicrobial activity of leaves extracted samples from medicinally important *Plumeria obtuse*. *Journal of Medicinal Plants Research*, 7 (17): 1121-1128.
29. Zamir R., S. A. Khalil, S. T. Shah, M. S. Khan, K. Ahmad, **Shahenshah**, and N. Ahmad. 2012. Efficient *in vitro* regeneration of sugarcane (*Saccharum officinarum* L.) from bud explants. *Biotechnology & Biotechnological Equipment*, 26(4): 3094 – 3099.
30. Rahman, Q. W., M. Sajid, **Shahenshah**, H. Khan, Q. L. Rahman, D. Ahmad, F. Wahid, and Z. Muhammad. 2012. Effect of different herbicides and row spacings on the growth and yield of tomato (*Lycopersicon esculentum* L.). *Pakistan Journal of Weed Science Research*, 18 (2): 157-165.
31. Rahman, Q. L., M. Sajjad, N. Khan, **Shahenshah**, and M. Nazir. 2011. Costs and net returns of tobacco production in district swabi (Khyber Pakhtunkhwa) Pakistan. *Interdisciplinary Journal of Contemporary Research & Business*, 3(8): 160-171.

32. Shuja, M. N., W. Ali, A. Iqbal, I. Ali, I. Munir, D. Ahmad, Inamullah, **Shahenshah**, G. Ahmad, M. A. Khan, and Z. A. Swati. 2011. Maize breeding for marginal lands: Physiological and molecular approach to decipher response and selection of maize recombinant inbred lines (RILs) under water deficit at early growth stage. *African Journal Biotechnology*, 10 (18): 3521-3528.
 33. Arif, M., M. T. Jan, M. J. Khan, M. Saeed, I. Munir, Ziauddin, H. Akbar, **Shahenshah**, and M. Z. Khan. 2011. Effect of cropping system and residue Management on maize. *Pakistan Journal of Botany*, 43(2): 915-930.
 34. Hamayoon, R., H. Khan, **Shahenshah**, L. Naz, I. Munir, M. Arif, I. A. Khalil, and A. Z. Khan. 2011. Performance of chickpea genotypes under two different environmental conditions. *African Journal of Biotechnology*, 10 (9): 1534- 1544.
 35. **Shahenshah**, Y. Yoshizumi, Li. Mao-song, and A. Isoda. 2010. Assessment of photochemical reflectance index as a tool for evaluation of chlorophyll fluorescence parameters in cotton and peanut cultivars under water stress condition. *Agriculture Sciences in China*, 9(5): 101-105.
 36. **Shahenshah** and A. Isoda. 2009. Effects of water stress on leaf temperature and chlorophyll fluorescence parameters in cotton and peanut. *Plant Production Science*, 13 (3): 269-278.
 37. Raza, M., H. Khan, M.J. Tahir, M. Hussain, and **Shahenshah**. 2004. Effect of different combinations of NPK on growth and yield of seed cotton variety CIM-443. *Sarhad Journal of Agriculture*, 20(1): 1-4.
 38. Ali, K., **Shahenshah**, A. Basir, and H. Akbar. 2003. Effect of intra and inter row spacing on the performance of maize, CV. Kisan-90. *Sarhad Journal of Agriculture*, 19(4): 433-437.
 39. **Shahenshah**, S. Khan, F. Subhan, Z. Mohammad, and Attaullah. 2002. Effect of different row and plant spacing on the yield of FCV tobacco, var. speight G-28. *Sarhad Journal of Agriculture*, 18(4): 359-362.
 40. Ali K., **Shahenshah**, A. Basir, S. Khan, and I. Ahmad. 2002. Effect of different N.P.K. levels on the performance of FCV tobacco. *Sarhad Journal of Agriculture*, 18(4): 363-366.
 41. **Shahenshah**, S. Khan, Z. Mohammad, Y. Hayat, and M. Arif, 2001. Effect of different row spacing and orientations on the performance of maize. *Sarhad Journal of Agriculture*, 17(4): 515-518.
 42. Khan, S., **Shahenshah**, H. Akbar, and S. Khan. 2001. Effect of planting geometry on yield and yield components in mung bean. *Sarhad J. Agric.* 17(4): 519-524.
 43. Khan, S., **Shahenshah**, N. E. Afridi, and S. Khan. 2001. Effect of nitrogen, phosphorus and potash on the yield of desi tobacco (cv. Rustica-13). *Sarhad Journal of Agriculture*, 17(2): 165-169.
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REFERENCES

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