

Professor Dr. Hamayoon Khan

Director Climate Change Sciences, the University of Agriculture Peshawar Khyber Pakhtunkhwa-25130, Pakistan,

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Personal

Information:

Name: Hamayoon Khan
Father's Name: Haji Nowsher Khan
Permanent address: Mohalla: Babi Khail, Village & Post Office: Taraki,
Tehsil: Razar, District: Swabi, Khyber Pakhtunkhwa- Pakistan.
Date of Birth: 11-04-1970
C.N.I.C.No: 16202-3234014-3
Domicile: Swabi
Religion: Islam
Marital Status: Married
Nationality: Pakistani
Languages: Pashto, Urdu & English

Professional Goal:

My goal as a Climatologist and Environmental Scientist is to combat climate change and its impacts on improving sustainable crop production to ensure food security, alleviate poverty, and protect the planet for future generations.

Area of Specialization:

Climate change sciences, Environment and crop production Crop, Physiology, Soil Plant Water Relations and Crop Nutrition, Environmental Conservation Science, and natural resource management.

- HEC Approved Supervisor: Yes

Academic Qualifications:

1. Post Doctorate
Ehime University, Matsuyama Japan, September 2011 to October 2012
2. Ph.D. (Environment Conservation Science)
2009
Department of Life Environment Conservation Science,
The United Graduate School of Agricultural Sciences, Ehime University, Matsuyama, Japan

PhD Thesis Title: “Adsorption Behavior of Water on Allophone and its Relationship with the Agronomic Traits of Soybean Cultivation”.

PhD Advisor:

Dr. Teruo Henmi, Professor in Soil & Environmental Sciences Department, Dean Faculty of Agriculture, Ehime University Matsuyama, Japan.

3. MS (Environment Conservation Science) 2006

Department of Agricultural Bio resource Science,
The United Graduate School of Agricultural Sciences, Ehime University, Matsuyama, Japan

MS Advisor:

Dr. Teruo Henmi, Professor in Soil & Environmental Sciences Department, Dean Faculty of Agriculture, Ehime University Matsuyama, Japan

Courses Studied during MS (Environment Conservation Science)

- Principle of Natural Resources and Global Environment
- Frontier of Agricultural and Related Science I
- Frontier of Agricultural and Related Science II
- Outline of The Science For Environmental Conservation
- Conservation of Aquatic Environments
- Hydrological Aspects in Ecology
- Urban Ecological Chemistry
- Chemistry for Improvement of Environments
- Environmental physical chemistry
- Exercise of Environmental Conservation I
- Exercise of Environmental Conservation II
- Exercise of Research Environmental Conservation I
- Exercise of Research Environmental Conservation II
- Conservation Genetics

4. M.Sc (Hons) (Agronomy)

Department of Agronomy, the University of Agriculture, Peshawar-Pakistan
1995

5. B.Sc. Hons (Agronomy)

Department of Agronomy, the University of Agriculture, Peshawar-Pakistan
1994

Academic Record

Examination Passed	Board /University	Year of Passing	Marks Obtained	%age	Division
Post Doctorate	Ehime University, Japan	2011	-	-	A-grade
PhD	Ehime University , Japan	2009	-	-	A-grade
MS	Ehime University, Japan	2006	-	-	A-grade
M.Sc (Hons) Agronomy	The University of Agriculture Peshawar	1995	839/1000 CGPA 3.90/4	84.00	1 st
B.Sc (Hons) Agronomy	The University of Agriculture Peshawar	1993	4385/5400 CGPA 3.87/4	81.20	1 st
HSSC	F.G College, H-9, Islamabad	1989	716/1100	65.09	1 st
SSC	B.I.S.E Peshawar	1986	583/850	68.59	1 st

Teaching and Research Experience

1. **Professor**, Department of Agronomy, University of Agriculture Peshawar–Since April 28, 2012–till date–
2. **Associate Professor**, Department of Agronomy, University of Agriculture Peshawar–Since December 29, 2009– April 28, 2012.
3. **Assistant Professor**, Department of Agronomy, University of Agriculture Peshawar–Since January 1, 2005– December 29, 2009.
4. **Lecturer**, Department of Agronomy, University of Agriculture Peshawar– Since July 17, 1996 – January 1, 2005.

Administrative experience:

- Working as Director Climate Change Centre, The University of Agriculture Peshawar since 21, December, 2018– Till date.
- Worked as Director Teaching/Director Admission, The University of Agriculture Peshawar, January 23, 2017 till 20th April 2022.

Other Administrative and Academic Services:

- i. Member of University Syndicate: 2001–2003.
- ii. Member of university syndicate 2019–2021.
- iii. **Warden**: Hostel No. 07, From 12–09–1997 to 04–09–2000
- iv. **Staff Proctor**: From 12–09–1997 to 04–09–1999
- v. **Convener** University Maintenance and Repair Committee, The University of

- Agriculture Peshawar
- vi. **Convener** house allotment committee the university of agriculture Peshawar
 - vii. **Convener** tour committee, The University of Agriculture Peshawar
 - viii. **Convener** University Affiliation Committee, The University of Agriculture Peshawar
 - ix. Member of Board of Advanced Studies and Research, The University of Agriculture Peshawar from the last Six years till date.
 - x. External Examiner, University of Peshawar
 - xi. External Examiner, ARID Agriculture University Rawalpindi.

Research Projects Completed:

1. Establishment and Strengthening of Climate Change Center in the University of Agriculture Peshawar. (17 Million).
2. Climate risk profile of the selected districts in Khyber Pakhtunkhwa. (8 Million).
3. Adaptability and Production Technology of Jatropha Plants the project was Rs. 1.0 Million.
4. Integrated use of Biochar, Fym and nitrogen fertilizer for enhancing productivity of cereal and legume-based cropping patterns. (4Million)

Books Published:

1. Climate Scenarios 2011-2040 of Ten Districts of Khyber Pakhtunkhwa-Pakistan.
2. Forecasting Impact of Climate change on Key Crops of 10 Selected Districts of Khyber Pakhtunkhwa (Pakistan).
3. Climate Smart Agriculture for Khyber Pakhtunkhwa Pakistan

Experience of Working with International bodies:

- Participated Actively in “2018 Seminar on Management of Agricultural Production for Pakistan” at China from October 30th –November 19th, 2018.
- Vast experience of working with Japanese academician's including many from different parts of the world as M.Phil. And then as PhD Scholar from 2003 to 2009.
- One year research experience at Ehime University Japan as post-doctoral fellow.
- Working with FAO of the United Nations for preparation of climate risk profile of Khyber Pakhtunkhwa.
- Working with World Food Programme for the preparation Seasonal livelihood map in thirty selected districts of the country

Organized/participated in National & International Trainings/

Conferences/Workshops:

1. **Organized 5 days international conference** on sustainable agriculture and food security held on 27th August to 31st to August, 2023 at Peshawar University Sub Campus, Bara Gali.
2. **Organized 2 days international conference** on “Innovations in Agriculture” 28th March to 29th March, 2017, at The University of Agriculture Peshawar, Pakistan.
3. **Organized 3 days international conference** on “Climate Smart Agriculture” 27th January to 29th January, 2018, at The University of Agriculture Peshawar, Pakistan.
4. **Organized 3 days International Conference** on “Climate Change Threats to Agriculture and Food Security” 22nd November 22 to 24th November, 2017 at The University of Agriculture Peshawar, Pakistan.
5. **Organized 4 days international conference** on “food security through sustainable plant Protection, Strategies held on 16th January to 20th January, 2022 at The University of Agriculture Peshawar, Pakistan.
6. **The 13th international Clay Conference**–Clay sphere: Past, Present and Future– and 49th Annual meeting of the Clay Science Society of Japan 21st August to 27th August, 2005. Waseda University, Tokyo, Japan.
7. **Three days International Conference** titled “Climate Change: A Challenge for Agriculturists” May28–30, 2012 at the University of Agriculture, Peshawar, Pakistan as Conference Secretary.
8. Sustainable farming through intervention of agricultural mechanization and renewable energy technologies held on June 30 to July 1, 2021. The University of Agriculture Peshawar, Pakistan.
9. Establishing a Platform for Climate Resilient and Low Carbon Urban Development (Asian Development Bank) **One-day Capacity Building Workshop** on Downscaling of NDCs to Provincial and Local Level held in Pearl Continental

(PC) Peshawar on August 18th, 2022.

10. Establishing a Platform for Climate Resilient and Low Carbon Urban Development (Asian Development Bank) **One-day Capacity Building Workshop** on Climate Change Risk and Vulnerability Assessment held in Pearl Continental (PC) Peshawar on August 30th, 2022.
11. Establishing a Platform for Climate Resilient and Low Carbon Urban Development (Asian Development Bank) **One-day Capacity Building Workshop** on Climate Change Financing and Investment Project Prioritization held in Pearl Continental (PC) Peshawar on September 13th, 2022.
12. Adsorption of water on Nano-ball as affected by heat treatments, infrared and X-rays powder diffraction data. The Clay Science Conference organized by the Japanese Society of Clay Science held in September 6-9, 2006.
13. Adsorption of water on Nano-ball as affected by heat treatments, infrared and X-rays powder diffraction data. Clay Science Conference organized by the Japanese Society of Clay Science held in Hokkaido September 11-14, 2007.
14. Interaction between water molecule and surface structure of soil particles in relation to crop cultivation. Clay Science Conference organized by the Clay Science Society of Japan held in Okinawa, September 2-5, 2008.
15. **Attended international workshop** on “Sustainable food security under climate change” July 26-28, 2018 at Serena Hotel Islamabad, Pakistan.
16. Organized a two days training workshop on “How to Write a Worth Publishing Research Paper” October 18-19, 2017, at The University of Agriculture Peshawar, Pakistan.
17. Organized a workshop for Women on “Research Methodologies and Scientific writing” 7th February 2018, at The University of Agriculture Peshawar, Pakistan.
18. Organized a Post Graduate Research Symposium on March 24th, 2016, at The University of Agriculture Peshawar, Pakistan.

19. Participated Actively in “2018 Seminar on Management of Agricultural Production for Pakistan” at China from October 30th –November 19th , 2018
20. Participated in a training on “Biosafety Training Workshop for Young Researchers” May 10th 2016.
21. Attended a Joint Seminar given by The United Graduate School of Agricultural Sciences, Ehime University, Matsuyama Japan, 29–31 August, 2007
22. Three days National Conference on “Innovative Technologies and Sustainable Development in Agriculture” on Aug.19–22, 2014 at Baragali (Abbottabad), under Agricultural University Teachers Association (AUTA).
23. One day seminar on "Production of medicinal plants in Pakistan" on February 07,2012 organized by the Department of Agronomy, the University of Agriculture, Peshawar.
24. Two-day conference titled “Recent Trends in Agronomic Strategies for further Green Revolution” under the Pakistan Society of Agronomy at the University of Agriculture, Peshawar on 2nd May to 3rd May, 2012.
25. One day workshop on “Prospect of Jatropha bio diesel plant in Pakistan” on 19 June 2014 organized by the Agricultural University Teachers Foundation (AUTA) at The University of Agriculture, Peshawar Pakistan.
26. **Three days international conference** on Emerging trend in sustainable business management held on 07–09 November 2023. Organized by institute of business and management sciences the University of Agriculture Peshawar.
27. **Three days international conference** on computing technologies, tools and applications held from 4th to 6th June, 2024 at institute of computer sciences and information technology the University of Agriculture Peshawar.
28. Participated in **three workshop days international** on sustainable food systems under climate change in south Asia from June 26–28, Serena hotel Islamabad

Demonstrated Experience of Leadership:

- **President (two turns)** Federation of All Pakistan Universities Academic Staff Association (FAPUASA), 2011-12 & 2016-17.
- **President** Federation of All Pakistan Universities Academic Staff Association (FAPUASA), 2012-2013, 2024-2025 KP Chapter
- **President (five turns)** Agriculture University Teachers Association (AUTA), 2011-12, 2012-13, 2015-16, 2016-17 and 2024-2025.
- **Managing Director**, Agriculture University Teachers Foundation (AUTF), from 2016 till date

QEC University Grading:

A+ grade in Quality Evaluation Reports in all the mentioned courses

Number BSc (Hons), Msc (Hons) and PhD students supervised and awarded degree:

- PhD: (07 Completed & 02 in-progress)
- MPhil: (59)
- BSc(Hons): (80)

Referee/ Editor:

- Journal Revista Planta Daninha, Brazil
- African Journal of Agricultural Science and Technology
- Sarhad Journal of Agriculture
- Referee Journal of Cereals & Oilseeds
- Pakistan Tobacco Journal

Professional Societies Membership

- Crop Science Society of Japan
- Clay Science society of Japan
- Pakistan Society of Agronomy, Faisalabad
- Monbukagakusho Alumni Association of Pakistan(MAAP)
- The International Society for Agricultural Metrology
- Asia-Pacific Chemical, Biological & Environmental Engineering Society
- Saudi Arabian Water Environment Association

Awards/ Distinctions:

- Monbukagakusho Scholarship (2003) for Ph.D., Government of Japan,
- Selected for "2018 Seminar on Management of Agricultural Production for Pakistan" organized at China from October 30th –November 19th, 2018
- First Position in B.Sc. Hons. Agronomy (Distinction)
- First Position in M.Sc Hons. Agronomy (Distinction)
- Best Debater Award (Inter college completion)

Countries visited:

- Japan, Canada, Kingdom of Saudi Arabia, China, England, Bahrain & UAE.

Linkages with Foreign Organizations

- Xinjiang Hi-Tech Talents Manage Co. Ltd
- Xinjiang ShenXin science and technology cooperation base Co. Ltd

Collaborators & Other Affiliations

- Dr. Naoto Matsue, Professor, Soil and Environmental Sciences, Ehime University Matsuyama, Japan;
- Dr. Iftikhar Ahmed, Director National Agriculture Research Council, Pakistan

Dr. RiazAllam, Senior Scientist, National Agriculture Research Council, Islamabad

Research Publications in peer reviewed HEC recognized/refereed journals

Impact Factor Publications

1. Ajmalud Din 1,2, Rozina Gul 1, Hamayoon Khan 3, Julian Garcia-Abadillo Velasco 2,4, Reyna Persa 2, Julio Isidro y Sánchez 4 and Diego Jarquin 2,* (2024). Assessing the Genotype-by-Environment G×E Interaction in Desi Chickpea via the Bayesian Additive Main Effects and Multiplicative Interaction Model. Agriculture 24, 14, 215. <https://doi.org/10.3390/agriculture14020215>
2. Siraj, Shumaila, Muhammad Aaqil Khan, Muhammad Hamayun, Sajid Ali, Sumera Afzal Khan, Anwar Hussain, Amjad Iqbal, **Hamayoon Khan**, Sang-Mo Kang, and In-Jung Lee. "Microbacterium oxydans regulates physio-hormonal and molecular attributes of Solanum lycopersicum under drought stress." Agronomy 12, no. 12 (2022): 3224. (IF: 3.7)
3. Din, Imadud, **Hamayoon Khan**, Nazir Ahmad Khan, and Aka Khil. "Inoculation of nitrogen fixing bacteria in conjugation with integrated nitrogen sources induced changes in phenology, growth, nitrogen assimilation and productivity of wheat crop." Journal of the Saudi Society of Agricultural Sciences 20, no. 7 (2021): 459-466. (IF: 4.47)
4. Jan, Farzana Gul, Muhammad Hamayun, Anwar Hussain, Amjad Iqbal, Gul Jan, Sumera Afzal Khan, **Hamayoon Khan**, and In-Jung Lee. "A promising growth promoting Meyerozyma caribbica from Solanum xanthocarpum alleviated stress in maize plants." Bioscience reports 39, no. 10 (2019): BSR20190290.. (IF: 2.5)
5. Salman M, Rizwana R, **Khan H**, Munir I, Hamayun M, Iqbal A, Rehman A, Amin K, Ahmed G, Khan M, Khan A. Synergistic effect of silver nanoparticles and polymyxin B against biofilm produced by Pseudomonas aeruginosa isolates of pus samples in vitro. Artificial cells, nanomedicine, and biotechnology. 2019 Dec

6. Nausheen Ameer, Ghulam Mustafa, Imran Khan and **Hamayoon Khan**. 2018. Chemical Senses: Promising Tools for the Online Monitoring of Flourides. Research Review. Flourides 51(3) 252-266.
7. Rozina Gul , **Hamayoon Khan** , Shahren shah, Naqib Ullah Khan , Noreen Asim, Abdul Latif and Ko Harada. 2018. Characterization for Nodulation and Detection of Duplicate Gene Action of Dominant Epistasis Control ajdfjjkakssjdling Root Nodulation in Chickpea (Cicer arietinum). Int. J. Agric. Biol., 20: 683-688.
8. Rehman G, Hamayun M, Iqbal A, Khan SA, **Khan H**, Shehzad A, Khan AL, Hussain A, Kim H-Y, Ahmad J, Ahmad A, Ali Lee I-J (2017) Effect of Mathonalic Extract of Dandelion Roots on Cancer Cell Lines and AMP-Activated Protein Kinase Payhway. Frontiers in Pharmacology.
9. Surraya Shahab, Ghulam Mustafa, Imran Khan and **Hamayoon Khan**. 2017. Effects of Flourides Ion Toxicity on Animals, Plants and Soil Health. Research Review. Flouride 50(4) 393-408
10. **Hamayoon Khan**, Rozina Gul and Naqib Ullah Khan. 2017. Appraisal of interaction among nipping and chickpea (cicer arietinum I.) Genotypes and their correlated response for grain yield. The JAPS., 27(4) 1295-1302.
11. Gul, M. Saeed, H. Khan, **Hamayoon Khan**, M. I. Khan and I. Khan. 2017. Impact of water hyacinth and water lettuce aqueous extracts on growth and germination of wheat and its associated troublesome weeds. Journal of Applied Ecology and Environmental Research. 15(3): 939-950.
12. Zafrullah Khan, Shah Alam Khan, **Hamayoon Khan**, Naeem Khan, Khwaja Junaid and Inamullah Khan (2017). Seven Local Commercial Wheat Cultivars Tested for Resistance against Rhopalosiphum padi L. in Pakistan. Pak. J. Zool., vol. 49(3), 793 -799
13. Anum Aslam, Sofia Khalid, **Hamayoon Khan** and M. N. Ahamd. 2016. Determination of fluride concentration in tooth pastes and mouth washes marketed in Rawalpindi by ion seclective electrode method. Fluoride J. (Accepted for Publication)
14. Khan, I.A., G. Hassan, N. Malik, R. Khan, **Hamayoon Khan** and S.A. Khan. 2016. Effect of herbicides on yield and yield components of hybrid maize (Zea mays). 2016. Planta Daninha, Volume 36(4): 21-25.
15. A.U. Haq, N.U. Khan, H. Raza, S. Gul, S. Akbar, S.U. Khan, S. Muhammad, M. Ali1, **H. Khan** and S.M. Khan (2017). Genetic attributes of f3 populations and their parental lines in upland cotton. The JAPS, 27(2), 655-666

16. Shahan shah, Ghufraan ghani , **Hamayoon khan** , Muhammad arif , Abdul qahar , Inamullah , Asad ali and Musharaf ahmad (2015). Response of maize cultivars to phosphorus and zinc nutrition. *Pak. J. Bot.*, 47(SI): 289-292
17. Rozina Gul, **Hamayoon Khan**, Arif Khan and Naqibullah khan. (2014). Characterization of chickpea germplasm for nodulation and effect of rhizobium inoculation on nodules number and seed yield. *The Journal of Animal & Plant Sciences*, 24(5):1421-1429
18. Rozina Gul, **Hamayoon Khan** and Naqibullah khan. (2014). Genetic linkage effect on inheritance of nodulation and leaf color in chickpea (*Cicerarietinum L.*). *SABRAO Journal of Breeding and Genetics* 46 (1) 89-98.
19. Farhan Ali, Rozina Gul, **Hamayoon Khan**, HidayatUllah. (2013). Heterosis and early generation testing is a pivotal method for production of hybrid. *Australian Journal of Crop Science*, 7(11):1728-1736
20. RozinaGul, **Hamayoon Khan** and Maryam Bibi. (2013). Genetic analysis and interrelationship of yield and yield attributing traits in chickpea (*Cicerarietinum L.*). *The Journal of Animal & Plant Sciences*, 23(2): 2013, Page: 521-526.
21. **Hamayoon Khan**, Naoto Matsue and TeruoHenmi. (2006). Adsorption of Water on nano-ball allophane. *Journal of Clay Science Japan*, 12 (2): 261-266.
22. **Hamayoon Khan**, Naoto Matsue and TeruoHenmi. (2006). Adsorption of water on nano-ball allophane as affected by heat treatment. *Journal of Clay Science Japan*, 13 (2): 43-50.
23. Rozina K., **Hamayoon Khan**, K. Harada. 2010. Evaluation of microsatellite markers to discriminate induced mutation lines, hybrid lines and cultigens in chickpea (*Cicerarietinum L.*). *Aust. J. crop Sci*, 4(5),301-308
24. Rozina. H., **Hamayoon 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. *Afr. J. Biotechnol.*, 10(9),1534-1544
25. Rozina G., **Hamayoon Khan**, M. Bibi, Q.U. Ain, B. Imran. 2013. Genetic analysis and interrelationship of yield attributibg traits in chickpea (*Cicerarietinum L.*). *The J. An. & Pl. Sci.*, 23(2): 2013: 521-526
26. **Hamayoon Khan**, Amir Z. Khan, P.shah, F. Mohd, Amanullah, S.Perveen, S.Nigar, S.K. Khalil and M. Zubair. (2010). Vigor test used to rank seed lot quality and predict field emergence in wheat. *Pak. J. Bot.*, 42(5): 3147-3155.
27. **Hamayoon Khan**, Amir Z. Khan, R. Khan, S. Nigar, B. Saeed, H. Gul, Amanullah, S. Wahab, A. Muhammad, M. Ayub, N. Matsue and T. Henmi. (2011). Morphology and Yield of Soybean grown on Allophanic Soil as Influenced by synthetic Zeolite Application.. *Pak.J.Bot.* 43(4): 2099-210.
28. **Hamayoon Khan**, Amir Z. Khan, P. Shah, S. Nigar, S. Perveen, M.K. Shah, Amanullah, S. K. Khalil, S. Munir and M. Zubair (2011). Seed Quality and Vigor of Soybean Cultivars as Influenced by Canopy Temperature. *Pak. J. Bot.*, 43(1): 643-648.

29. Hamayoon Khan, M.Shafi, JehanBakht, Satta Ali, M. Aman Khan, and M. Sharif. 2012. Effect of planting density on phenology, growth and yield of maize(Zea mays L.). Pak. J. Bot., 44(2), 691–696.
30. Shad K.K., F. khan, A. Rehman, F. Muhammad, Amanullah, A.z. khan, S. wahab and Hamayoon Khan. 2011. Dual purpose wheat for forage and grain yield in response to cutting, seed rate and nitrogen. Pak. J. Bot.,43(2); 937–947.
31. Amanullah, S. Shah and Hamayoon Khan.2014. Effect of variable nitrogen sourcesand rate on leaf area index and total dry matter accumulation in maiz Zea may L, genotypes under calcareous soils. Turkish Journal of field Crops. 19(2):276 –284.

National and International Publications/ (HEC Recognized)

1. Rozina Gul¹ , Hamayoon Khan² , Saad Ahmed¹ , Zarafshan Aftab¹ Aqsa farrukh, Samra Aftab, Mehwish Fida, Asma Gul, Bakhtwar Asif Hussain, Arjmand Asad Ullah, Zunaira Khan, Ushna Riaz, Uzma Ibrahim, Syed Attaullah Shah, Sajjad ur Rehman (2023). Response of chickpea (Cicer arietinumL).Genotypes to rhizobial inoculation and fertilizer application. Journal of Xi'an Shiyu University, Natural Science Edition, volume 29, ISSUE 10, page 581–601.
2. Haq Nawaz and Hamayoon Khan (2023). Improving growth and development of rice cultivars through management practices. Journal of XI an Shiyu University, Natural science Edition Volume 19 ISSUE 02 FEBRUARY 2023. Page 803-811.
3. Muhmmad Zubair, Hamayoon Khan, Jehan Bakht and Inamullah Khan (2022). Wheat performance under different tillge practices with and without added N in calcareous soils. Journal of XI an shiyu University, Natural Science Edition, volume 18 ISSUE 11 Page 385-402.
4. Din, Imadud, Fazal Munsif, Irfan Ahmad Shah, **Hamayoon Khan**, Fahad Ullah Khan, Shahab Uddin, and Tauqir Islam. "Genetic variability and heritability for yield and yield associated traits of wheat genotypes in Nowshera Valley, Pakistan." Pakistan Journal of Agricultural Research 31, no. 3 (2018): 216-222.
5. Naimat Ullah , Asim Muhammad , Habib Ullah Marwat , Hamayoon Khan and Muhammad Subhan (2017). Vigour and viability of osmoprimed harvested seeds of

wheat varieties. Journal of Agricultural and Biological Science, 12 (1), 12-18.

6. Asim Muhammad, Inamullah, Hamayoon Khan and Muhammad Arif (2017). Germination and field emergence potential of soybean land races vs improved varieties under different sowing dates. Pure Appl. Biol., <http://dx.doi.org/10.19045/bspab.2017.60007>
7. Fayaz Ahmed and Hamayoon Khan. 2016. Effect of different fertilizer treatments on the performance of some local rice varieties under SRI (system of rice intensification) and conventional management practices in district Swat. Pure Applied Biology., 5(1): 37-47
8. Soshma Jan, Rozina Gul, Fahim Ullah Khan, Hamayun Khan and Sana Saeed. 2015. Interrelationships among yield and yield components in chickpea (*Cicer arietinum* L.) under irrigated and rainfed conditions. Pure Appl. Biol. 4(4): 551-556
9. Hamayoon Khan, M. Arif, R. Gul and K. Naveed. 2001. The Residual effect of groundnut crop and soil amendments on the performance of gram under rain fed condition. Sarhad J. Agric. Vol. 17(4). 525-531
10. Hamayoon Khan, M. Arif, R. Gul, N. Ahmad and I. A. Khan. 2002. Effects of sowing dates on maize cultivars. Sarhad J. Agric. Vol. 18(1):159-163.
11. Rozina G., Hamayoon Khan, S. Sattar, Farhatullah, F. Munsif, Shadman S. A. K. Bangash and S. H. Khattak. 2011. Comparison among nodulated and non-nodulated chickpea genotypes. Sarhad J. Agri., 27(2): 577-581.
12. Rozina G., Hamayoon Khan, G. Mairag, S. Ali, Farhatullah and Ikramullah. 2007. Correlation Study on Morphological and Yield Parameters of Mungbean (*Vigna radiata*). Sarhad J. Agric. 24(1): 37-42.
13. Rozina K., Farhatullah and Hamayoon Khan. 2011. Dissection of variability and heritability estimates of chickpea germplasm for various morphological markers and quantitative traits. Sarhad J. Agric. 27(1): 67-72.
14. Mohsin R., Hamayoon Khan, F. Karim and M. J. Tahir 2003. Nitrogen use efficiency as affected by time of application in rice (IRRI-6). Sarhad j. Agric. Vol. 19, No.4.
15. Mohsin R., Hamayoon Khan, M.J. Tahir, M. Hussain and Shahenshah. 2004. Effect of

different combinations of NPK on growth and yield of seed cotton varieties CIM-443. Sarhad J.Agric. 20(1);1-4.

16. B. Ahmad, Mohammad, Hamayoon Khan, and S.Z. Iqbal 1999. Seed production and yield component as effected by ade,size, and spacing of steckling in turnip (brassica Rapa L.). Sarhad J. Agric. Vol. 15 (5).
17. B. Ahmad, I. Mohammad, M. shafi, H. Akbar, Hamayoon Khan, and A. Razaq (1999). Effect of row spacing on the yield and yield components of wheat (cultivar, Bakhtawar -92). Sarhad j. Agric. Vol. 15 (2).
18. Tariq M., R. Gul, F.Munsif, F. Jalal, Z. Hussain, N. Noreen, Hamayoon Khan, Nasiruddin and H. Khan. 2011. Effect of phosphorus levels on yield and yield components of maize. Sarhad J. Agric. 27(2): 167-170.
19. Saifullah, A.Jan, F. Munsif, M. Arif, Hamayoon Khan, K. Ali, M. Waqas and A. Ali. 2011. Performance of millet varieties under different irrigation levels. Sarhad J. Agric. 27(1); 1-7.
20. Muhammad A., Ihsanullah, S. Khan, F. Ghani and Hamayoon Khan (2001). Response of maize varieties to different planting methods. Sarhad J. Agric. Vol. 17 (2); 159-163.
21. Habib A., Siraj-ud-Din, M. shafi, J. Bakht, B. Ahmad and Hamayoon Khan (2000). Yield and yield components of wheat and gram planted in monoculture and in combination at different row directions and crop geometry. Sarhad J. Agric. Vol. 16 (3).
22. Fida M., H. Daniel, K. Shahzad and Hamayoon Khan (2001). Heritability estimations for yield and its components in wheat. Sarhad J. Agric. Vol 17 (2).
23. Fazal H. T., A.Z. Khan, J. M. Khan, S. K. Khalil and Hamayoon Khan (2002). Field performance of maiz planted at different seeding depth and seed size. Pak. J. seed tech., 1(2).
24. Hamayoon Khan, N. Matsue and T. Henmi (2007). Adsorption of Water on Nano-Ball Allophane as Affected by Dry Grinding. Int. J. Soil Sci., 2 (4): 247-257.
25. Amir Z. K., Hamayoon Khan, R. Khan, A. Ghoneim and A. Ebid. 2007. Seed Development Profile of Soybean as Influenced by Planting Dates and Cultivars under Temperate Environment. Am. J. Plt. Phys. 2(4):251-260.

26. Amir Z. K., Hamayoon Khan and R. Khan. (2007). Influence of Canopy Temperature on Physio-Chemical Quality of soybean. Research Journal of Botany, 2 (4) 202–207.
27. Amir Z. K., Hamayoon Khan, A. Ghoneim, R. Khan and A. Ebid. 2007. Seed Quality and Vigor of Soybean as Influenced by Planting Dates, Density and Cultivar under Temperate Environment. Int. J. of Agric. Res. 2 (4): 368–376.
28. Amir Zaman Khan, Hamayoon Khan, R. Khan and A. Ghoneim and A. Ebid. 2007. Comparison of Different Wheat Seed Categories (VS) Farmer' seed: Yield and Yield Components. Trends in Appl. Sci. Res. 2(6):529–534,
29. Hamayoon Khan, A. Z. Khan, R. Khan, N. Matsu and T. Henmi. 2008. Zeolite Application Affects Vegetative Phenology of determinate and indeterminate soybean grown on Allophanic soil. Int. J. Agric. Res. 3(2): 148–154.
30. Hamayoon Khan, A. Z. Khan, R. Khan, N. Matsu and T. Henmi. 2008. Water adsorption and surface acidity of nano-ball Allophane as affected by heat treatment. J. Env. Sci. & tech. 2 (1): 22–30.
31. Hamayoon Khan, A. Z. Khan, R. Khan, N. Matsu and T. Henmi. 2008. Soybean Leaf Area, Plant height and Reproductive Development as influenced by Zeolite Application and Allophanic Soil. J. plt Sci. 3(4): 277–286.
32. Hamayoon Khan, A. Z. Khan, R. Khan, N. Matsu and T. Henmi. 2009. Influence of Zeolite Application on Germination and Seed Quality of Soybean grown on Allophanic soil. Res. J. Seed Sci. 2(1):1–8
33. Rozina Gul, Sajid Ali, Hamayoon Khan, Nazia, Farhan Ali and Imran Ali. 2007. Variability among Mungbean (vigna radiate) Genotypes for yield and Yield Components Grown in Peshawar Valley. J. Agric. Bio. Sci. 1 (4):6–9.
34. Haq Nawaz and Hamayoon Khan. 2023. Improving growth and development of rice cultivars through management practices. J. Xi'an shiyu university, Natural Science Edition. Volume 19, issue 02: 803–811.
35. M. Zubair, Hamayoon Khan, j. bakht and Inamullah Khan. 2022. Wheat performance under different tillage practices and crop sequences with and without added nitrogen in calcareous soils. J. Xi'an shiyu university, Natural Science Edition. Volume 18, issue 11:

References:

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