



Curriculum Vitae

Personal Profile:

Name: Asif Iqbal
Date of Birth: 19 April 1992
Marital Status: Married
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LANGUAGES

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

EDUCATION

Post Doctorate (2020-2022) – Crop Nutritional Physiology (Agronomy)

Sponsored by China Postdoctoral Organization and Cotton Research Institute of Chinese Academy of Agricultural Sciences, Anyang, Henan, China. Research conducted on “The physiological and molecular mechanisms of phosphorus use efficiency in cotton”.

Advisor: Prof. Dr. Du Xiongming.

Ph.D. (2017 – 2020) Crop Cultivation and Farming System (Agronomy)

Sponsored by Chinese Scholarship Council, China

State Key Laboratory of Cotton Biology, Institute of Cotton Research, Chinese Academy of Agricultural Sciences, Anyang, Henan, China. Research conducted on “The physiological and molecular mechanisms of nitrogen use efficiency in cotton”.

Advisor: Prof. Dr. Song Meizhen.

Master of Science (Hons) in Agriculture (Agronomy) (2015 – 2016)

Department of Agronomy, The University of Agriculture, Peshawar, Pakistan. Worked on the “Plant residues, organic and inorganic phosphorus management for improving growth and yield of hybrid maize with and without phosphate solubilizing bacteria”.

Bachelor of Science (Hons) in Agriculture (Agronomy) (2011 – 2014)

Department of Agronomy, The University of Agriculture, Peshawar, Pakistan. Studied the department of Agronomy specialization courses and conducted research on “Effect of potassium rates and application timing on growth and yield of maize with and without cattle manure”.

Higher Secondary School Certificate (2010)

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

Secondary School Certificate (2009)

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

EMPLOYMENT / PROFESSIONAL EXPERIENCE

<u>POSITION</u>	<u>ORGANIZATION</u>	<u>PERIOD</u>
Assistant Professor	Hazara University Mansehra, Pakistan	Feb. 2023-till date
Associate Professor	Peking University Institute of Advanced Agriculture Sciences, China	Aug. 2022-Feb. 2023
Postdoctoral Fellow	Cotton Research Institute of Chinese Academy of Agricultural Sciences, China	Aug. 2020-Aug. 2022
Research Assistant	The University of Agriculture Peshawar, Pakistan	Jan. 2015-Sep. 2017

Courses Taught and other services provided to students

Code	Title	CrHr	Level
AGR100	Basic Agriculture	3(2+1)	Undergraduate
AGRON340	Agro-Technology of Major Crops	3(2+1)	Undergraduate
AGRON342	Biological Nitrogen Fixation	3(2+1)	Undergraduate
AGRON344	Arid and Rainfed Agriculture	3(2+1)	Undergraduate
AGRON349	Agro Ecology	3(3+0)	Undergraduate
AGRON441	Plant and Soil Analysis	3(2+1)	Undergraduate
AGRON483	Experimental Design and Analysis	3(2+1)	Undergraduate
HORT452	Research Methods in Horticulture	3(2+1)	Undergraduate
PBG431	Experimentation in Plant Breeding	3(2+1)	Undergraduate
AGRON605	Crop Nutrition Management	3(3+0)	Graduate
AGRON609	Stress Agronomy	3(3+0)	Graduate

STUDENTS SUPERVISED BSc (HONS) Agriculture (Agronomy)

S. N	Name of Student	Title of Thesis
1	Atif Raja	Effect of Sowing Dates on The Growth, Yield, And Yield Components of Pea Genotypes
2	Muhammad	Effect of Sowing Date on Growth and Production of Wheat in

	Azam Khan	Agroclimatic Zone of Mansehra
3	Muhammad Jamal Haider	Evaluating Adaptability of Different Linseed Lines Under Agroclimatic Conditions of Mansehra
4	Mazhar Ul Islam	Evaluation of Chickpea Genotypes for Higher Yield Under Agro-Climatic Conditions Of Hazara Region
5	Sakindar Ayub	Evaluation of Wheat Genotypes for Higher Yield Under Agro-Climatic Conditions of Hazara Region
6	Asim Hameed	Evaluation of Durum Wheat Lines for Morphological and Yield Related Traits
7	Mohsin Bilal	Screening of Wheat Genotypes for Yield Under Agro-Climatic Zone of Mansehra
8	Muhammad Awais Kahn	Evaluation of Wheat Genotypes for Yield Associated Traits Under the Agro-Climatic Condition of Mansehra
9	Muhammad Bilal	Screening of Wheat Genotypes for Yield and Yield Related Traits in Mansehra Region
10	Umer Zeb	Evaluation of Wheat Genotypes on the Basis of Morphological and Yield Contributing Traits for Mansehra Region
11	Aizaz Ullah	Evaluating the Effect of Poultry Manure on Performance of Wheat
12	Sher Afzal	Effect of Various Urea Levels on Yield and Yield Contributing Traits of Wheat
13	Inayat Khan Niazi	Evaluation of Maize Genotypes for Yield and Nitrogen Use Efficiency
14	Muhammad Nisar	Genotypic Variation in Maize Genotypes for Agronomic Traits and Phosphorus Use Efficiency
15	Khawaja Abdullah	Performance of Rice (<i>Oryza Sativa</i> L.) Lines Under the Agroclimatic Condition of Mansehra
16	Asfandyar Khan	Importance of selection of cultivars in canola-chickpea-pea intercropping systems for high productivity
17	Moavia Siddique	Evaluation Of Pea Genotypes for Yield And Associated Traits in Pea-Canola-Chickpea Intercropping
18	Muhammad Uzair	Comparative Yield Performance of Desi and Kabuli Chickpeas in Chickpea-Canola-Pea Intercropping Systems
19	Bilal Junaid Khan	Impact of Cereal-Legume Intercropping on Dry Matter Partitioning of Pea Under Low and Normal Nitrogen
20	Rahim Hussain	Effect of Cereal-Legume Intercropping on Wheat Yield and Yield Components Under Low and Normal Nitrogen
21	Saad Naveed	Evaluation of Dry Matter Partitioning of Wheat in Cereal-Legume Intercropping Under Low and Normal Nitrogen
22	Sibgha Kala Khan	Response of Pea Yield and Yield Components to Cereal-Legume Intercropping Under Low and Normal Nitrogen
23	Sumreen Gul	Soil Fertility Enhancement Through Wheat-Pea Intercropping Under Contrasting Nitrogen Inputs
24	Mehmoona Arshad	Genotypic Variation in Pea For Yield and Associated Traits Under Canola-Chickpea-Pea Intercropping Systems
25	Raheel Sheikh	Evaluating the Yield Performance of Desi and Kabuli Chickpea in Diverse Intercropping with Canola and Pea
26	Attaullah	Wheat Yield and Yield Component Response to Cereal-Legume Intercropping Under Varying Nitrogen Availability
27	Muhammad Anas	Pea Yield and Yield Component Response to Intercropping with Cereals Under Differential Nitrogen Regimes
28	Irnum Sajjad	Dry Matter Partitioning of Pea as Influenced by Cereal-Legume Intercropping Under Low and Normal Nitrogen Supply
29	Shawana Bibi	Dry Matter Partitioning in Wheat as Affected by Cereal-Legume Intercropping Under Low and Normal Nitrogen

30	Hamza Salam	Evaluating the Impact of Canola Cultivar Selection on Productivity in Diverse Legume-Based Intercropping Systems
31	Aneeta Zeb	Research In Progress
32	Areeba Ihtisham	Research In Progress
33	Aqsa Javed	Research In Progress
34	Jawad Shah	Research In Progress
35	Hifza Khan	Research In Progress
36	Tayyba Bashir	Research In Progress
37	Hiba Fazal	Research In Progress
38	Mohammad Yousaf	Research In Progress
39	Hameed Ullah	Research In Progress

STUDENTS SUPERVISED MSc (HONS) Agriculture (Agronomy)

S. No	Name of Student	Title of Thesis
1	Ghanwa Maheen	Influence of nitrogen nutrition on phenological development, growth, yield and nitrogen use efficiency of maize under salt stress
2	Nawabzada Khizer	Effect of phosphorus application on growth, yield and phosphorus use efficiency of maize under alkaline stress.
3	Sumreen Gul	Research In Progress
4	Mehmoona Arshad	Research In Progress

PEER-REVIEWED PUBLICATIONS (Impact factor Journals)

1. Raja, A., Bo, Z., Muhammad, N., Khan, I. U., Abbas, M., **Iqbal, A.**, ... & Song, M. 2026. Soil Alkalinity and Cotton Production: Challenges, Physiological Effects, and Sustainable Solutions. *Plant Stress*, 101330.
2. Kayoumu, M., Zhang, B., Gu, Y., Xieraili, W., **Iqbal, A.**, Pu, Y., Song, M. and Dong, Q. 2026. Root-microbiome synergy drives phosphorus acquisition in cotton: Genotype-specific recruitment of beneficial taxa under low phosphorus stress. *Industrial Crops and Products*, 239: 122427.
3. Xiangru, W., Sijia, R., Xiaoyan, M., **Iqbal, A.**, Qiang, D., Huiping, G., Qianqian, W., Tong, L., Noor, M., and Xiling, Z. 2026. Exogenous silicon enhances the salt tolerance of cotton seedlings by regulating water status through abscisic acid and aquaporins. *Journal of the Science of Food and Agriculture*. DOI 10.1002/jsfa.70423, (IF = 3.5).
4. Amir, M. Shah, S.T., Basit, **A. Iqbal, A.**, Mahmood, T., Sajid, M., Rehman, M., Ismail, M., Saeed, M.F., and Jamal, A. 2026. Preharvest Potassium Silicate and Glycine Synergistically Enhance Yield, 2 Quality, and Storability of Apricot (*Prunus armeniaca* L.). *Journal of the Science of Food and Agriculture*. DOI: 10.1002/jsfa.70460, (IF = 4.125).

5. **Iqbal, A.;** Gui, H.; Zheng, C.; Wang, X.; Zhang, X.; Song, M.; Ma, X. 2025. Phosphorus Supplementation Enhances Growth and Antioxidant Defense Against Cadmium Stress in Cotton. *Antioxidants*. 14: 686. (IF = 6.0).
6. Gu, Y., Li, X., **Iqbal, A.,** Wang, X., Luo, T., Wang, Q., and Dong, Q. 2025. Characterization and Expression Analysis of *Gossypium NLP* Family Reveals the Roles of *Ghnlp2.1* Contributing to Nitrogen Use Efficiency in Upland Cotton. *Industrial Crops and Products*. 235: 121731. (IF = 6.2).
7. Jin, D.; Xu, Y.; **Iqbal, A.;** Liu, Y.; Zhang, Y.; Lin, Y.; Tang, L.; Wang, X.; Wang, J.; Huang, M. 2025. Comparative Transcriptome and Hormonal Analysis Reveals the Mechanisms of Salt Tolerance in Rice. *International Journal of Molecular Sciences*. 26: 6660. (IF = 4.9).
8. Pu, Y., Wang, P., Abbas, M., **Iqbal, A.,** Dong, Q., Luo, T., Wang, Q., Cao, F. and Song, M., 2025. Insights from model plants to improve cotton's use of nitrogen and phosphorus. *Journal of Cotton Research*. 8(1): 1-12. (IF = 3.1).
9. Jin, D.; **Iqbal, A.;** Mengshu, H.; Yuqing, L.; Yage, Z.; Youzhen, L.; Liqiong, T.; Xinhua, W.; Junjie, W.; Yanchao, X.; Peng, X.; Xiaoning, W. 2025. Comprehensive Screening and Identification of Salt-Tolerant Rice Germplasm to Address Rising Threat of Global Soil Salinization. *Euphytica*. Accepted. (IF = 1.7).
10. **Iqbal, A.,** Dong, Q., Wang, X., Gui, H., Zhang, H., Zhang, X., and Song, M. 2024. Influence of partial substitution of chemical fertilizer through organic manure on cotton yield and soil fertility in yangtze river regions of china. *Communications In Soil Science And Plant Analysis*. 55(15): 2312–2321. (IF = 1.8).
11. Alamzeb, M[†], **Iqbal A.†,** Inamullah, Iqbal M. and Inam U. 2024. Integrated use of phosphorus sources, phosphate solubilizing bacteria, and rhizobium enhanced growth, nitrogen, and phosphorus uptake in chickpea. *Journal of Plant Nutrition*. Accepted. (IF = 2.1).
12. Li, X., Gu, Y., Kayoumu, M., Muhammad, N., Wang, X., Gui, H., Luo, T., Wang, Q., Wumaierjiang, X., Ruan, S., **Iqbal, A.,** Zhang, X., Song, M. and Dong Q. 2024. Systematic characterization of *Gossypium GLN* family genes reveals a potential function of *GhGLN1.1a* regulates nitrogen use efficiency in cotton. *BMC Plant Biology*, 24(1), 313. (IF = 5.26).
13. **Iqbal, A.,** Dong, Q., Wang, X., Gui, H., Zhang, H., Zhang, X., and Song, M. 2023. Integrative physiological, transcriptome and metabolome analysis reveals the involvement of carbon and flavonoid biosynthesis in low phosphorus tolerance in cotton. *Plant Physiology and Biochemistry*. 196: 302–317. (IF = 5.437).
14. **Iqbal, A.,** Dong, Q., Wang, X., Gui, H., Zhang, H., Zhang, X., and Song, M. 2023. Phosphorus and carbohydrate metabolism contributes to low phosphorus tolerance in cotton. *BMC Plant Biology*. 23: 97, (IF = 5.26).
15. **Iqbal, A.,** Gui, H., Dong, Q., Wang, X., Zhang, H., Zhang, X., and Song, M. 2023. Differential responses of contrasting low phosphorus tolerant cotton genotypes under low phosphorus and drought stress. *BMC Plant Biology*. 23: 168, (IF = 5.26).
16. **Kayoumu, M.#, Iqbal, I#,** Noor, M., Xiaotong, L., Leilei, L., Xiangru, W., Huiping, G., Qian, Q., Sijia, R., Ruishi, G., Xiling, Z., Meizhen, S. and Qiang, Dong. 2023.

- Phosphorus Availability Affects the Photosynthesis and Anti-oxidant System of Contrasting Low P Tolerant Cotton Genotypes. *Antioxidants*. 12, 466. (IF = 7.675).
17. **Iqbal, A.**, Niu, J., Dong, Q., Wang, X., Gui, H., Zhang, H., Nianchnag, P., Zhang, X., and Song, M. 2022. Physiological characteristics of cotton subtending leaf are associated with yield in contrasting N-efficient cotton genotypes. *Frontiers in Plant Science*. 13: 825116, (IF = 6.627).
 18. **Iqbal, A.**, Gui, H., Wang, X., Zhang, H., Zhang, X., and Song, M. 2022. Genome-wide expression analysis reveals involvement of asparagine synthetase family in cotton development and nitrogen metabolism. *BMC Plant Biology*. 22: 122, (IF = 5.26).
 19. **Iqbal, A.**, Niu, J., Gui, H., Wang, X., Zhang, H., Zhang, X., and Song, M. 2023. Genotypic variation in carbon and nitrogen metabolism in the cotton subtending leaves and seed cotton yield under various nitrogen levels. *Journal of the Science of Food and Agriculture*. DOI: 10.1002/jsfa.12412, (IF = 4.125).
 20. **Iqbal, A.**, Gui, H., Wang, X., Zhang, H., Zhang, X., and Song, M. 2022. Low phosphorus tolerance in cotton genotypes is regulated by root morphology and physiology. *Journal of Plant Growth Regulation*. doi.org/10.1007/s00344-022-10829-5, (IF = 4.64).
 21. **Iqbal, A.**, Dong, Q., Wang, X., Gui, H., Zhang, H., Nianchnag, P., Zhang, X., and Song, M. 2023. Genotypic variation in cotton genotypes for low phosphorus tolerance and efficiency under different growth conditions. *Gesunde Pflanzen*. <https://doi.org/10.1007/s10343-022-00823-y>, (IF = 2.082).
 22. **Iqbal, A.**, Dong, Q., Wang, X., Gui, H., Zhang, H., Nianchnag, P., Zhang, X., and Song, M. 2022. N-efficient cotton genotype grown under low nitrogen shows relatively large root system, high biomass accumulation and nitrogen metabolism. *Agronomy Journal (Wiley)*. 114: 582–600, (IF = 2.65).
 23. **Iqbal, A.**, Dong, Q., Wang, X., Gui, H., Zhang, H., Zhang, X., and Song, M. 2020. Transcriptome Analysis Reveals Differences in Key Genes and Pathways Regulating Carbon and Nitrogen Metabolism in Cotton Genotypes under N Starvation and Resupply. *International Journal of Molecular Sciences*, 21, 1500; doi:10.3390/ijms21041500, (IF = 6.208).
 24. **Iqbal, A.**, Dong, Q., Wang, Z., Wang, X., Gui, H., Zhang, H., Nianchnag, P., Zhang, X., and Song, M. 2020. Growth and nitrogen metabolism are associated with nitrogen-use efficiency in cotton genotypes. *Plant Physiology and Biochemistry*, 149, (2020): 61–74, (IF = 5.437).
 25. **Iqbal, A.**, Dong, Q., Wang, X., Gui, H., Zhang, H., Zhang, X., and Song, M. 2020. Variations in nitrogen metabolism are closely linked with nitrogen uptake and utilization efficiency in cotton genotypes under various nitrogen supplies. *Plants*, 9, 250; doi:10.3390/plants9020250, (IF = 4.658).
 26. **Iqbal, A.**, Dong, Q., Wang, X., Gui, H., Zhang, H., Zhang, X., and Song, M. 2020. High nitrogen enhance drought tolerance in cotton through antioxidant enzymatic activities, nitrogen metabolism and osmotic adjustment. *Plants*, 9, 178; doi:10.3390/plants9020178, (IF = 4.658).

27. **Iqbal, A.**, Dong, Q., Madeeha A., Wang, X., Gui, H., Zhang, H., Nianchnag, P., Zhang, X., and Song, M. 2020. Untangling the molecular mechanisms and functions of nitrate to improve nitrogen use efficiency. *Journal of the Science of Food and Agriculture*, 100: 904–914, (IF = 4.125).
28. **Iqbal, A.**, Dong, Q., Wang, X., Gui, H., Zhang, H., Nianchnag, P., Zhang, X., and Song, M. 2020. Nitrogen preference and genetic variation of cotton genotypes for nitrogen use efficiency. *Journal of the Science of Food and Agriculture*, (wileyonlinelibrary.com) DOI 10.1002/jsfa.10308, (IF = 4.125).
29. **Iqbal, A.**, Gui, H., Zhang, H., Wang, X., Nianchnag, P., Dong, Q., and Song, M. 2019. Genotypic Variation in Cotton Genotypes for Phosphorus-Use Efficiency. *Agronomy*, 9, 689; doi:10.3390/agronomy9110689, (IF = 3.949).
30. **Iqbal, A.**, Amanullah, M. Iqbal. 2015. Impact of potassium rates and their application time on dry matter partitioning, biomass and harvest index of maize (*Zea mays*) with and without cattle dung application. *Emirates Journal of Food and Agriculture*. 2015. 27(5): 447-453, (IF = 1.041).
31. Amanullah, **Asif Iqbal**, Ali A, Fahad S and Parmar B. 2016. Nitrogen Source and Rate Management Improve Maize Productivity of Smallholders under Semiarid Climates. *Frontiers in Plant Science*. 7: 1-9. doi: 10.3389/fpls.2016.01773, (IF = 6.627).
32. Amanullah, Shams. Ul Tamraiz Khan, **Asif Iqbal** and Shah Fahad. 2016. Growth and productivity response of hybrid rice to application of animal manures, plant residues and phosphorus. *Frontiers in Plant Sciences*.7: 1-10, (IF = 6.627).
33. Amanullah, **Asif Iqbal**, Irfanullah & Zeeshan Hidayat. 2016. Potassium management for improving growth and grain yield of maize (*Zea mays* L.) under moisture stress condition. *Scientific Reports (Nature)*, 6, 34627; doi: 10.1038/srep34627, (IF = 4.996).
34. Amanullah, **Asif Iqbal**, et al. 2019. Integrated Management of Phosphorus, Organic Sources, and Beneficial Microbes Improve Dry Matter Partitioning of Maize. *Communications in Soil Science and Plant Analysis*. doi.org/10.1080/00103624.2019. 1667378, (IF = 1.58).
35. Shah, S. A. A. Mian, I. A. Sharif, M., **Asif Iqbal** et al. 2020. Foliar sulphur application and its timings improve wheat (*Triticum aestivum* L.) productivity in semiarid climate. *Applied Ecology and Environmental Research* 18(3):3873-3885, (IF = 0.816).
36. Jing, N., H. Gui, **Asif Iqbal** et al. 2020. N-Use Efficiency and yield of cotton (*G. hirsutum* L.) are improved through the combination of N-Fertilizer reduction and N-efficient cultivar. *Agronomy* 2021, 11, 55. <https://doi.org/10.3390/11010055> (IF = 3.949).
37. Saeed, M. **Asif Iqbal** et al. 2020. Comparisons of weed suppression and strawberry yield obtained with organic and synthetic mulches and herbicides. *Pakistan Journal of Botany*. 52(6): 1999-2002. (IF = 1.101).
38. Waqar Afzal Malik, Imran Mahmood, Abdul Razzaq, Maria Afzal, Ghulam Abbas Shah, **Asif Iqbal**, Muhammad Zain, Allah Ditta, Saeed Ahmed Asad, Ishfaq Ahmad, Naimatullah Mangi & Wuwei Ye. 2021. Exploring potential of copper and silver

- nano particles to establish efficient callogenesis and regeneration system for wheat (*Triticum aestivum* L.). *GM Crops & Food Biotechnology in Agriculture and the Food Chain*. <https://doi.org/10.1080/21645698.2021.1917975>. (IF = 3.118).
39. Ning W, Xiangru W, Qian Q, **A. Iqbal**, Hengheng Z, Jianbin S, Qiang D, Qinghua X, Xiaohong L, Huiping G, Meizhen S, Xiling Z, and Gentu Y. 2022. Analysis of the effects of mepiquat chloride priming on the seedling growth-promoting in cotton under salt stress by multi-omics. *Industrial Crops & Products* 186 (2022) 115296. (IF = 6.449).
 40. Leilei L., Q. Qi, H. Zhang, Q. Dong, **A. Iqbal**, H. Gui, M. Kayoumu, M. Song, X. Zhang and X. Wang. 2022. Ameliorative Effects of Silicon against Salt Stress in *Gossypium hirsutum* L. *Antioxidants* 2022, 11, 1520. (IF = 7.675).
 41. Dong, Q., W., Guoxin, W., A. Iqbal, M. Noor, Wang, X., Gui, H., Zhang, M. Kayoumu, X. Li, Zhang, X., and Song, M. 2022. Identification and Expression Analysis of the NPF Genes in Cotton. *International Journal of Molecular Sciences*. 23, 14262. (IF = 6.208).
 42. Mirezhatijiang, K., Xiaotong, L., **Iqbal, A.**, Wang, X., Gui, H., Qian Q., Sijia R., Ruishi, G., Dong, Q., Zhang, X., and Song, M. 2022. Genetic variation in morphological traits in cotton and their roles in increasing phosphorus-use efficiency in response to low phosphorus availability. *Frontiers in Plant Science*. 13:1051080, (IF = 6.627).
 43. **Iqbal, A.**, Dong, Q., Wang, X., Gui, H., Zhang, H., Nianchnag, P., Zhang, X., and Song, M. 2021. Genotypic variation in root morphology, cotton subtending leaf physiology and fiber quality against nitrogen. *Journal of Cotton Research*. 4: 32.
 44. **Iqbal, A.**, Amanullah, Song, M., Shah, Z., Madeeha, A., Iqbal, M. 2019. Integrated use of plant residues, phosphorus and beneficial microbes improve hybrid maize productivity in semiarid climates. *Acta Ecologica Sinica* 39: 348-355.

PUBLICATIONS in Non-Impact Factor Journals

45. **Iqbal, A.**, Amanullah, Song, M., Shah, Z., Madeeha, A., Iqbal, M. 2019. Integrated use of plant residues, phosphorus and beneficial microbes improve hybrid maize productivity in semiarid climates. *Acta Ecologica Sinica* 39: 348-355.
46. Iqbal, M., Bilal, S.A., **Iqbal, A.**, Madeeha, A. et al. 2019. Distribution of *Quercus leucotrichophora* at different location and elevation in Jandool Valley, Northern Pakistan. *Acta Ecologica Sinica*. 39: 438-442.
47. Amanullah, Khan, N., Khan, M.I., **Iqbal, A.** 2019. Wheat biomass and harvest index increases with integrated use of phosphorus, zinc and beneficial microbes under semiarid climates. *Journal of Micro., Biotech. Food Sciscinces*. 9 (2) 242-247.
48. Madeeha, A., Shazma, A., **Iqbal, A.**, Song, M., Iqbal, M., Sara, Ramzan, M., and Tabassum, A. 2018. Application of organic sources and nitrogen affect dry matter partitioning in wheat under tillage systems. *Pakistan Journal of Agricultural Research*. 31(2): 106-115.

49. **Iqbal, A.**, Amanullah, Ali, A., Iqbal, M. et al. 2017. Integrated use of phosphorus and organic matter improve fodder yield of Moth bean (*Vigna aconitifolia* (Jacq.) under irrigated and dryland conditions of Pakistan. *Journal of AgriSearch*. 4(1):10-15.
50. Amanullah, Saifullah, Nawab, K., **Iqbal, A.** et al. 2017. Response of summer pulses (mung bean vs. mash bean) to integrated use of organic carbon sources and phosphorus in dry lands. *African Journal of Agricultural Research*. 12(50): 3470-3490. DOI: 10.5897/AJAR2017.12745.
51. Amanullah, Khan, S., **Iqbal, A.**, and Ali, A. 2017. Beneficial microorganism and phosphorus application influence growth, biomass and harvest index in irrigated and dryland wheat under calcareous soils in semiarid condition. *Journal of AgriSearch*. 4(2): 92-97.
52. Madeeha, A., Anwar, S., **Iqbal, A.**, Parmar, B., and Iqbal, M. 2017. Organic sources, nitrogen and tillage systems improve wheat productivity and profitability under semiarid climates. *Journal of Pharmacognosy and Phytochemistry*. SP1: 73-78.
53. Fahad, U.K., Khan, A.A., **Iqbal, A.**, Iqbal, M., Madeeha, A. 2017. Effect of phosphorus and rhizobium inoculation on yield and yield components of mungbean. *Journal of Pharmacognosy and Phytochemistry*. SP1: 252-258.
54. Shazma, A., Faraz, M., **Iqbal, A.**, Islam, M., Iqbal, M., Madeeha, A. 2017. Phosphorus management improve productivity of wheat varieties under semiarid climates. *Journal of Pharmacognosy and Phytochemistry*. SP1: 259-263.
55. Rawan, S., Farzana, B., Nadeem, K., **Iqbal, A.**, and Madeeha, M. 2017. Postharvest Life of Guava (*Psidium guajava* L.) Varieties as Affected by Storage Intervals at Room Temperature. *Pakistan Journal of Agricultural Research*. 30(2): 155-161.
56. Amanullah, Zahid, A., **Iqbal, A.**, and Ikramullah. 2016. Phosphorus and Tillage Management for Maize under Irrigated and Dryland Conditions. *Annals of Plant Sciences*. 5.3: 1304-1311.
57. Muntaha, S., Iqbal, M., Shamia, Madeeha, A., **Iqbal, A.** 2018. Identification of most important weed species in wheat crop under high altitude in northern Pakistan. *Journal of Pharmacognosy and Phytochemistry*. SP1: 913-917.
58. Shah, S.T., Sami, U., Nadeem, K., **Iqbal, A.**, Iqbal, M. 2016. Effect of zinc as a foliar spray on growth and flower production of Marigold (*Tagetes erecta* L.). *Pure and Applied Biology*, 5(4): 738-743.
59. Wasim, A., S. Anwar, W. Akram, Madeeha, A., and **Iqbal, A.** 2016. Response of barley varieties to phosphorus and sulphur levels. *Pure and Applied Biology*. <http://dx.doi.org/10.19045/bspab.2016.50032>.
60. Khan, N., Shah, S.T., and **Iqbal, A.** 2016. Propagating media affects mango seed germination at different depths. *Pure and Applied Biology*. <http://dx.doi.org/10.19045/bspab.2016.50051>.
61. Kakar, K.M., Amanullah, Saleem, M., and **Iqbal, A.** 2015. Effect of irrigation levels and planting methods on phenology, growth, biomass and harvest index of spring Wheat under semiarid condition. *Pure and Applied Biology*. 4(3): 375-383.
62. Amanullah, Bashir, S.F., Qahar, A., Shah, S., Ahmad, B., and **Iqbal, A.** 2015. Interactive effects of nitrogen and sulfur on growth, dry matter partitioning and yield of maize. *Pure and Applied Biology*. 4(2): 164-170.

63. Amanullah, Ijaz, M., Kakar, K.M., Jan, A., **Iqbal, A.**, and Fahad, S. 2015. Impact of tillage systems on growth and yield of Mungbean (*Vigna radiata* L., Wilczek) varieties under dryland condition. *Pure and Applied Biology*. 4(3): 331-339.
64. Kakar, K.M., Amanullah, and **Iqbal, A.** 2015. Effect of irrigation levels and bed-system of planting on seed fill duration, seed growth rate, yield and yield components of spring wheat (*Triticum aestivum*) under semiarid condition. *Pure and Applied Biology*. 4(4): 511-521.
65. Nadeem Khan, Abdul Mateen Khattak, Syed Tanveer Shah and **Asif Iqbal**. 2021. Influence of humic acid and potassium on the growth and yield of squash (*Praecitrullus fistulosus* L.). *Journal of horticultural science & ornamental plants*. 13(3): 321-329.
66. Nadeem Khan and **Asif Iqbal**. 2021. Foliar application of micronutrients on gladiolus plants. *Journal of innovative agriculture*: 8(3): 1-3.
67. Nadeem Khan, Muhammad Ayaz Khan, and **Asif Iqbal**. 2021. Weeds control through allelopathic extracts from different plants. *Journal Innv. Agriculture*: 8(3): 4-7.

BOOK/BOOK CHAPTERS PUBLISHED/ACCEPTED

68. **Iqbal, A.**, Iqbal, M., Madeeha, and Song, M. 2022. Sustainable Agriculture Reviews 58: Phosphorus Use Efficiency for Sustainable Agriculture, 58. Springer Nature. ISBN: 978-3-031-16155-1.
69. **Iqbal, A.**, Dong, Q., Madeeha A., Gui, H., Wang, X., Zhang, H., Nianchnag, P., Zhang, X., and Song, M. 2019. Cotton crop responses to nitrogen fertilization: The potential for improving nitrogen use efficiency. Book, Published. LAP, Lambert Academic Publisher, ISBN: 978-620-0-08667-9.
70. **Iqbal, A.**, Iqbal, M., Madeeha, A., Dong, Q., Gui, H., Wang, X., Zhang, H., Nianchnag, P., Zhang, X., Fahad, S., and Song, M. 2022. Climate change and cotton production. Improvement of Plant Production in the Era of Climate Change. Book Chapter, Springer Nature. DOI: 10.1201/9781003286417-5.
71. **Iqbal, A.**, Fahad, S., Iqbal, M., Madeeha, A., Ahmad, A., Shazma, A., Khan, A.K., Arif, M., Inamullah, Shaheenshah, Saeed, M., and Song, M. 2020. Special adaptive features of plant species in response to drought. (eds) Salt and Drought Stress Tolerance in Plants. Signaling and Communication in Plants. Springer, Cham, https://doi.org/10.1007/978-3-030-40277-8_4.
72. **Iqbal, A.**, Iqbal, M., Madeeha, A., Dong, Q., Gui, H., Wang, X., Zhang, H., Nianchnag, P., Zhang, X., Fahad, S., and Song, M. 2020. Cross-Talk Between Phytohormone Signaling Pathways Under Abiotic Stress Conditions Book Chapter, Taylor & Francis. Published.
73. Muhammad, Z., Muhammad, A., Noman, S., Muhammad, A., Saliha, M., Jiusheng, L., Shafeeq, R., Ming, X., **A. Iqbal.**, Waqar, A.M., and Aiwang, D. 2022. Organic Phosphorous as an Alternative to Mineral Phosphatic Fertilizers. A. Iqbal et al. (eds.), Sustainable Agriculture Reviews 58, https://doi.org/10.1007/978-3-031-16155-1_3. Published.

74. Hafiza, A.M., Atta, R., Fazal, A., Nisar, A., Syed, S.A., Muhammad, S., Shahid, A., Zahid, H., Nasib, Z., Akhtar, R., Muzafar, S., Muhammad, I., and **A. Iqbal**. 2022. Advanced Biotechnological Tools for Improving Phosphorus Use Efficiency. A. Iqbal et al. (eds.), Sustainable Agriculture Reviews 58, Sustainable Agriculture Reviews 58, https://doi.org/10.1007/978-3-031-16155-1_7.

CONFERENCE(S) & WORKSHOP(S) ATTENDED or ORGANIZED

1. Conference on “Sustainable Crop and Animal Production Systems. Organized by Pakistan Agricultural Scientist Forum and The University of Haripur. Held on December 8-10, 2016.
2. Three-Days National Conference on “Thinking Climate Change Adaptation in Water and Farming” Think-Adapt. November, 28-30, 2016.
3. The Mega Event “Feature Film & Skit Competition” Organized by Agri-Anti Narcotics Society. The University of Agriculture Peshawar-Pakistan on May, 2016.
4. Four-day training course on “Integrated Rural Development” held at Pakistan Academy for Rural Development Peshawar. March 07-10, 2016.
5. Workshop on Informatics for Writing Manuscripts. February 25, 2016.
6. Mega Innovation and Entrepreneurship Event (DICE-2015) November 24-25, 2015.
7. One-day workshop/ training on “Urban Environmental Issues” Arrange by USAID. May 7, 2015.
8. Certificate Awarded after participated in one-day workshop on “Emergency Management” Organized by The University of Agriculture, Peshawar & Rescue 1122, Peshawar. April 15, 2015.
9. Nutrition and Health Awareness. Organized by Society of Nutrition & Dietetics Department of Human Nutrition, The University of Agriculture Peshawar. May 20, 2014.
10. One-day national seminar on “Exploitation of plants’ oil for direct use as biodiesel in the changing climate of Pakistan” Organized by Agriculture University Teachers Association (AUTA) Peshawar. June 19, 2014.
11. One-day workshop on “Role of Agriculture in Economic Development of Pakistan” Organized by provincial Youth Assembly.
12. International Conference on “Sustainable Crop Productivity: Threats and Options” April 11-12, 2013 at Ayub Agricultural Research Institute, Faisalabad-Pakistan.
13. International Conference on “Climate Change: A Challenge for Agriculturists” Organized under HEC Sponsored Project. May 28-30, 2012.
14. Certificate awarded on the occasion of “International Volunteer’s Day” By National Commission for Human Development. December 5, 2010.
15. The 3rd Sino-Pak International Conference on Innovations in Cotton Breeding and

- Biotechnology. Xinjiang, China. September, 2019.
16. 2nd Talent Recruitment & Project Matchmaking Event for Innovation & Development and Opening-up Innovation and International Technology Transfer Conference, Zhengzhou, Henan, China. 2019.
 17. 3rd Talent Recruitment & Project Matchmaking Event for Innovation & Development and Opening-up Innovation and International Technology Transfer Conference, Zhengzhou, Henan, China. 2020.
 18. Attended an International Conference on Biodiversity of Arid Zone as a Keynote Speaker. Sindh Agriculture University. 07-08 March 2023.
 19. Organized National Conference on Olive Production in Pakistan-A Holistic Approach. 14-15 June 2023.
 20. Organized an International Conference on “Innovations in Biotechnology and Genetic Engineering”. Hazara University Mansehra, Pakistan. 01-03 November 2023.
 21. Organized an International Conference on “Sustainable Agriculture and Genetic Resources”. Hazara University Mansehra, Pakistan. 09-11 May 2024.
 22. Organized an International Conference on “Genomics and Genome Editing in Agriculture, Biology, and Biomedicine”. Hazara University Mansehra, Pakistan. 19-20 June 2025.
 23. Organized an International Conference on “Sustainable Agriculture and Genetic Resources”. Biofortification for Nutritional Security, Hazara University Mansehra, Pakistan. 07-08 October 2025.
 24. Organized a National Conference on “Present Status and Future Prospects of Floriculture and Possible Value Addition Opportunities in Khyber Pakhtunkhwa. Hazara University Mansehra, Pakistan. 04 December 2025.

TRAINING(S) ATTENDED

Date	Place	Organized by	Title
July, 2023 to August 8	Beijing, Online	Ministry of Commerce and Ministry of Science and Technology of the People’s Republic of China	Key Technologies for Green Production of Fruit Trees
December 6-7, 2016	Pakistan Forest Institute, Peshawar	Pakistan Forest Institute, Peshawar	Sericulture and Apiculture
March 07-10, 2016	Peshawar	Pakistan Academy for Rural Development Peshawar	Integrated Rural Development

MEMBER PROFESSIONAL AND ACADEMIC BODIES

1. Member Crop Science Society of China.
2. Member American Society of Agronomy.
3. Member Board of Faculty of Biological and Health Sciences, Hazara University

Mansehra

4. Member Board of Studies of Department of Agriculture, Hazara University Mansehra
5. Member Graduate Research Committee of Department of Agriculture, Hazara University Mansehra
6. Member Supervisory Research Committee of Department of Agriculture, Hazara University Mansehra
7. Member Admission Committee of Department of Agriculture, Hazara University Mansehra
8. Coordinator Agronomy, Department of Agriculture, Hazara University Mansehra
9. Academic Coordinator, Department of Agriculture, Hazara University Mansehra
10. In-charge Website Updating, Department of Agriculture, Hazara University Mansehra.

ACADEMIC/PROFESSIONAL HONORS, AWARDS AND FELLOWSHIPS

1. **Best Handling Editor**, awarded by the Journal of Cotton Research for outstanding contributions for the year 2024.
2. **Best Editorial Board Member**, awarded by the BMC Plant Biology for outstanding contributions for the year 2024.
3. **Young Scientist Award**, by the VDGGOOD professional association for international scientist awards on engineering, science and medicine (2021).
4. **Nominated for Best Thesis Award**, by the crop science committee of Chinese Academy of Agricultural Sciences for best performance during Ph.D. studies (July 2020).
5. **Outstanding Graduate Student**, awarded by the Chinese Academy of Agricultural Sciences for best performance during Ph.D. studies (July 2020).
6. **Chinese Government Scholarship for Ph.D.**, awarded by Chinese Scholarship Council (2017-2020).
7. **Departmental Gold Medal** for obtaining 1st position amongst all the successful candidates of the **M.Sc. (Hons) Agronomy** for academic session 2015-2016. (CGPA: 3.98/4.00).
8. **HEC merit and need-based scholarship for master studies**, awarded by Higher Education of Pakistan. (2015-2016).
9. **Naway Sahar Laptop** (A tribute to youth talent), awarded by the provincial government of Khyber Pukhtunkhwa, Pakistan, 2013.
10. **Best Academic Performance award** on occasion of Tameer-E-Pakistan talent tribute 2013. Organized by study aid foundation for excellence (SAFE) The University of Agriculture Peshawar.
11. **Merit Academic Certificate** awarded by society of young agronomist (SOYA) Department of Agronomy, The University of Agriculture Peshawar for Best Performance in the Class.
12. **Academic award for Best Performance** in the year 2014 by study aid foundation for excellence (SAFE) The University of Agriculture Peshawar.

EDITORIAL BOARD MEMBER OF JOURNALS

1. Journal of Cotton Research
2. BMC Plant Biology
3. American Journal of Plant Biology
4. Journal of Phytology
5. International Journal of Fauna and Biological Studies

REVIEWER FOR JOURNALS/Organizations

1. Food and Agriculture Organization (UN)
2. Journal of Advanced Research
3. Industrial Crops and Products (Elsevier)
4. Applied Soil Ecology (Elsevier)
5. European Journal of Agronomy (Elsevier)
6. Plant Physiology and Biochemistry (Elsevier)
7. Journal of Plant Physiology (Elsevier)
8. Plant Science (Elsevier)
9. Biomass and Bioenergy (Elsevier)
10. Biocatalysis and Agricultural Biotechnology (Elsevier)
11. Agricultural Water Management (Elsevier)
12. Field Crops Research (Elsevier)
13. BMC Plant Biology
14. Plant Disease
15. Genomics (Elsevier)
16. Gene (Elsevier)
17. Plant Stress (Elsevier)
18. Journal of King Saud University – Science (Elsevier)
19. Data in Brief (Elsevier)
20. Postharvest Biology and Technology (Elsevier)
21. Frontiers in Plant Science
22. Functional Plant Biology
23. International Journal of Molecular Sciences
24. Plant Molecular Biology Reporter
25. Irrigation and Drainage (Wiley)
26. Grassland Science (Wiley)
27. Advances in Agriculture (Wiley)

28. Cogent Food & Agriculture (Taylor and Francis)
29. PeerJ
30. Journal of Advanced Research
31. Agronomy (MDPI)
32. Horticulturae (MDPI)
33. International Journal of Environmental Research and Public Health (MDPI)
34. Forests (MDPI)
35. Metabolites (MDPI)
36. International Journal of Environmental Research and Public Health (MDPI)
37. Life (MDPI)
38. Grasses (MDPI)
39. Agrochemicals (MDPI)
40. Metabolites (MDPI)
41. Water (MDPI)
42. Methods & Protocols (MDPI)
43. Journal of Cotton Research
44. Pakistan Journal of Botany
45. Gesunde Pflanzen
46. Philippine Journal of Science
47. Sarhad Journal of Agriculture

PATENT

1. **International patent** on “A special hydroponic device for cultivation and root phenotype observation of cotton throughout its growth period, **ZL202122565538.5**.”

RESEARCH GRANTS/PROJECTS

1. Rooftop Rainwater Harvesting Facility at Agriculture Research Farm of the Department of Agriculture, Hazara University Mansehra (1800,000 PKR), awarded by World Wide Fund for Nature.
2. Conducted Monsoon Plantation Drive at Hazara University Mansehra (300,000 PKR), In Collaboration with World Wide Fund for Nature.
3. Elucidating the involvement of carbon and flavonoid biosynthesis in low phosphorus tolerance in cotton (250,000 RMB; Chinese yuan), awarded by the Standardization of Cotton Cropping Technology Department of the Institute of Cotton Research, Chinese Academy of Agricultural Sciences (Grant number; 263983).
4. Screening and physiological mechanism of low phosphorus tolerant genotypes in Cotton (80,000 RMB; Chinese yuan), awarded by the Special Fund for Basic Scientific Research of Central Public Welfare Research Institutes (Grant number; 1610162021025).

5. Physiological and molecular mechanism of low phosphorus tolerance in cotton (120,000 RMB; Chinese Yuan), awarded by the State Key Laboratory of Cotton Biology, Institute of Cotton Research, Chinese Academy of Agricultural Sciences (Grant number; CB2021C10).
6. Mechanism of arbuscular mycorrhiza promoting nitrogen and phosphorus uptake and transport in cotton in saline-alkali soil (100,000 RMB, Chinese yuan), awarded by Special Fund for Basic Scientific Research of Central Public Welfare Research Institutes (Grant number; 1610162022029).
7. Study on the establishment of super high yield of the cotton field of “Kuanzaoyou” in Xinjian and control theory of high photosynthetic efficiency population (120,000 RMB, Chinese yuan), awarded by Special Fund for Basic Scientific Research of Central Public Welfare Research Institutes (Grant number; 1610162022023).
8. Construction of a quality standard system of “Kuanzaoyou” cotton planting in Xinjian (120,000 RMB, Chinese yuan), awarded by Special Fund for Basic Scientific Research of Central Public Welfare Research Institutes (Grant number; 1610162022024).

PRACTICAL WORK and RELATED ANALYSIS

1. Field, pot, and greenhouse experiments
2. Spectrophotometry
3. RNA Extraction
4. PCR, qPCR
5. Collection & Preservation of Plant Specimen
6. Microscopy
7. Bran + Luebbe Continuous-Flow AutoAnalyzer (AA3, Braun, Germany)
8. Photosynthesis (Licor-6800, USA), Fluorescence measurement (Handy-PEA)
9. Root analysis (Epson & WinRHIZO)
10. Soil nutrients Analysis
11. Transcriptome Analysis
12. Metabolome Analysis
13. Bioinformatics Analysis
14. Enzymatic Analysis
15. Statistical Analysis, etc.

REFERENCES

1. Professor Song Meizhen
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2. Professor Inam Ullah
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