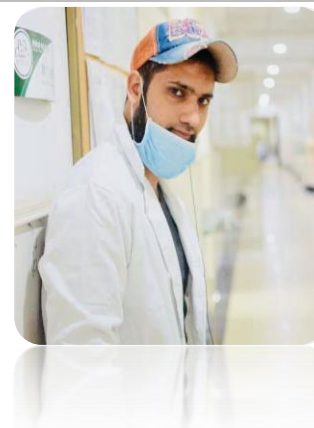


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Research Contribution Award Winner

Research interests

- Agricultural Sustainability of Heavy Metals and Environmental Pollutants
- The Role of Growth Regulators in Crop under Abiotic Stress
- Phytoremediation Potential of Fibrous Crop
- Removal of toxic Pollutants from the Contaminated Soil
- Antioxidant Response of the Plants against Stress Environment

Published Articles

- I. **Muhammad Hamzah Saleem**, Shafaqat Ali, Muzammal Rehman, Muhammad Shoaib Rana, Muhammad Rizwan, Muhammad Kamran, Muhammad Imran, Muhammad Riaz, Mona H. Soliman, Amr Elkelish, Lijun Liu (2020) Influence of phosphorus on copper phytoextraction via modulating cellular organelles in two jute (*Corchorus capsularis* L.) varieties grown in a copper mining soil of Hubei Province, China (Chemosphere) (IF **5.77**) (Citations **34**) (First author) <https://doi.org/10.1016/j.chemosphere.2020.126032>
- II. **Muhammad Hamzah Saleem**, Shah Fahad, Shahid Ullah Khan, Sunny Ahmar, Muhammad Hafeez Ullah Khan, Zahid Maqbool, Muzammal Rehman, Lijun Liu (2020) Morpho-physiological traits, gaseous exchange attributes, and phytoremediation potential of jute (*Corchorus capsularis* L.) grown in different concentrations of copper-

contaminated soil (Ecotoxicology and Environmental Safety) (IF **4.87**) (Citations **28**) (**First author**) <https://doi.org/10.1016/j.ecoenv.2019.109915>

- III. **Muhammad Hamzah Saleem**, Muhammad Kamran, Muzammal Rehman, Aasma Parveen, Sunny Ahmar, Muhammad Hafeez Ullah Khan, Bo Wang, Lijun Liu (2020) Morpho-physiological, biochemical, gaseous exchange response and copper accumulation potential of Flax (*Linum usitatissimum* L.) grown in a soil spiked differentially with copper (Journal of Environmental Management) (IF **5.64**) (Citations **37**) (**First author**) <https://doi.org/10.1016/j.jenvman.2019.109994>
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- XLIX. Amara Hassan, **Muhammad Hamzah Saleem**, Muhammad Arfan, Shafaqat Ali, Mobeen, Miral Javed, Faiza shafique khan, Khalil Ahmad, Sunaira Urooj, Muhammad Rizwan (2021) Oxidative stress alleviation as indicated by enzymatic and non-enzymatic antioxidants and osmoregulators in barley (*Hordeum vulgare* L.) under salt (NaCl) stress by ascorbic acid (AsA) (Pakistan Journal of Botany) (IF **0.80**) (Equal Contribution + Correspondence) (Accepted)
- L. Kashif Tanwir, Saghir Abbas, **Muhammad Hamzah Saleem**, Robina Iqbal, Hassan Javed Chaudhary, Muhammad Tariq Javed (2021) Chromium remediation potential of contrasting *Solanum lycopersicum* L. cultivars as deciphered by altered pH dynamics, growth and organic acids exudation under Cr stress (Environmental Science and Pollution Research) (IF **3.05**) (Co-Author) <https://doi.org/10.1007/s11356-020-12269-8>
- LI. Abdul Hameed, Nudrat Aisha Akram, **Muhammad Hamzah Saleem**, Muhammad Ashraf, Shakeel Ahmed, Shafaqat Ali, Abdulaziz Abdullah Alsahli, Mohammed Nasser Alyemeni (2021) Seed Treatment with α -Tocopherol Regulates Growth and Key Physio-Biochemical Attributes in Carrot (*Daucus carota* L.) Plants under Water Limited Regimes (Agronomy) (IF **2.60**) (Co-author) [10.3390/agronomy11030469](https://doi.org/10.3390/agronomy11030469)
- LII. Gang Deng, Mei Yang, **Muhammad Hamzah Saleem**, Muzammal Rehmana, Shah Fahad, Yang Yang, Mohamed Soliman Elshikh, Jawaher Alkahtani, Sardar Ali, and Shah Masaud Khan (2021) Nitrogen fertilizer ameliorate the remedial capacity of industrial hemp (*Cannabis sativa* L.) grown in lead contaminated soil (Journal of Plant Nutrition) (IF **1.13**) (Co-author) <https://doi.org/10.1080/01904167.2021.1881553>
- LIII. Fatima Noor, Ayesha Noor, Ali Raza Ishaq, Iqra Farzeen, **Muhammad Hamzah Saleem**, Kanwal Ghaffar, Muhammad Farhan Aslam, Sidra Aslam, Jen-Tsung Chen (2021) Recent advances in diagnostic and therapeutic approaches for breast cancer: A comprehensive review (Current Pharmaceutical Design) (IF **2.20**) (Co-author) [10.2174/1381612827666210303141416](https://doi.org/10.2174/1381612827666210303141416)
- LIV. Sahar Mumtaz, **Muhammad Hamzah Saleem**, Mansoor Hameed, Fatima Batool, Abida Parveen, Syeda Fasiha Amjad, Athar Mahmood, Muhammad Arfan, Shakeel Ahmed, Humaira Yasmin, Abdulaziz Abdullah Alsahli, Mohammed Nasser Alyemeni (2021) Anatomical adaptations and ionic homeostasis in aquatic halophyte *Cyperus laevigatus* L. under high salinities of Punjab (Saudi Journal of Biological Sciences) (IF **2.80**) (Correspondence) <https://doi.org/10.1016/j.sjbs.2021.03.002>
- LV. Amara Hassan, Syeda Fasiha Amjad, **Muhammad Hamzah Saleem**, Humaira Yasmin, Muhammad Imran, Muhammad Riaz, Qurban Ali, Faiz Ahmad Joyia, Mobeen, Shakeel Ahmed, Shafaqat Ali, Abdulaziz Abdullah Alsahli, Mohammed Nasser Alyemeni (2021) Foliar application of ascorbic acid enhances salinity stress tolerance in barley (*Hordeum vulgare* L.) through modulation of morpho-physio-biochemical attributes, ions uptake, osmo-protectants and stress response

genes expression (Saudi Journal of Biological Sciences) (IF **2.80**) (**Equal Contribution + Correspondence**) <https://doi.org/10.1016/j.sjbs.2021.03.045>

Research Progress

- Working as an **Editor** in Annals of Agriculture and Crop Sciences
- Working as a **Reviewer** in PLOS ONE
- Working as a **Reviewer** in Brazilian Journal of Botany
- Working as a **Reviewer** in Pakistan journal of Botany
- Working as a **Reviewer** in Peer J
- Working as a **Reviewer** in Pakistan Journal of Agricultural Sciences
- Working as a **Reviewer** in Asian Journal of Agriculture and Biology
- Working as a **Reviewer** in The Journal of Animal and Plant Sciences

Dissertation Topic (In Masters)

- **Morpho-Physiological Traits, Ultra-structure Alterations, and Phytoremediation Potential of Jute (*Corchorus capsularis* L.) Plant Grown in Copper Contaminated Soils**

Research Topics

- Terrestrial Ecotoxicity of Heavy Metals
- Environmental Sustainability Assessment
- Contaminated soil
- Health Risks
- Heavy Metals Distribution
- Heavy Metals Remediation
- Heavy Metal Contaminated Soil
- Agricultural Crops
- Plants Immunity
- Abiotic Stress
- Plant Growth Regulators
- Oxidative Stress in Plants
- Plant Defense System
- Crop Physiology
- Crop Morphology

- Crop Yield and Quality

Academic Career

Degree	Year	Board/University	Country ranking
Post-graduate Masters (Crop cultivation)	2017-2020	Huazhong Agricultural University, Wuhan China	29
Undergraduate (Bachelors) (Botany)	2012-2016	Government College University, Faisalabad Pakistan	14
Intermediate (F.Sc)	2010-2012	Government College University, Faisalabad Pakistan	14

Courses Studied (In Masters)

- Water Irrigation System
- Plant Stress Physiology
- Mineral Nutrition in Higher Plants
- Scientific Writing
- Soil Ecosystem
- Molecular Biology
- Plant Biochemistry
- Modern Ecology
- Advance Medicinal Plants
- Soil Physics
- Natural Medicinal Plants
- Chinese Culture

Languages

- Chinese Modern Language (Equivalent to **HSK 2**) (Marks 67/100)
- International English Language Testing System (**IELTS**) (I will appear in IELTS in August, 2020 at Wuhan China)

Laboratory Techniques

- Heavy Metals Extraction from the Soil (**Digestion** method)

- Heavy Metal Extraction from the Plants (**Digestion** method)
- Superoxidase Dismutase (**SOD**)
- Peroxidase (**POD**)
- Catalase (**CAT**)
- Ascorbate Peroxidase (**APX**)
- Proline
- Total Soluble Protein
- Total Chlorophyll contents
- Carotenoid contents
- Malondialdehyde (**MDA**)
- Hydrogen Peroxide (**H₂O₂**)
- Electrolyte Leakage (**EL**)
- IRGRA (**Photosynthesis**)
- Morphological traits

Software

- R Studio
- SigmaPlot
- Graph Pad Prism
- Origin
- Microsoft office
- Endnote
- Mendeley
- Statistix

Awards

- Winner of “**Research Contribution Award**” from Huazhong Agricultural University in 2020.
- Winner of “**Chinese Government Scholarship (CGS) Funded by China Scholarship Council (CSC)**” from 2017-2020 for master degree research
- Rewarded by “**Shahbaz Sharif Youth Initiative**” laptop in 2016

Work & Experience

- 2.5 Years as **Research Associate** at MOA Key Laboratory of Crop Ecophysiology and Farming System in the Middle Reaches of the Yangtze River, College of Plant Science and Technology, Huazhong Agricultural University, Wuhan 430070, China
- 3 Years Work Experience at The Educators (Secondary School) as a **Teacher** from 2013-2017
- 1 Year Work Experience at Mobilink (International Mobile Network Company) Franchise as a **salesman** from 2012-2013
- 6 months Teaching Experience at Al-Azam College as a **Teacher** in 2017

International Conferences (Participated)

- “**The First Annual Academic Symposium**” for International Students in 2018 at Huazhong Agricultural University China
- “**The Second Annual Academic Symposium**” for International Students in 2019 at Huazhong Agricultural University China
- “**The First International Forum on Crop Sciences Green Crops for Sustainable Agriculture**” in 2019 at Huazhong Agricultural University China
- “**5Th International Symposium on Genomics and Crop Genetic improvement-Heterosis**” in 2018 at Huazhong Agricultural University China
- “**Agricultural Genomics 2017: Functional Genomics towards Green Crops for Sustainable Agriculture**” in 2017 at Huazhong Agricultural University China

Personal Skills

1. Ability to Adjust in Different Environments
2. High Leadership Qualities
3. Can Work in a Group and Coordinate Well
4. Digestion of Plant and Soil Samples
5. Experience of Field Experiment Designing
6. Atomic Absorption Spectrophotometer
7. Flame photometer

Objectives

- To Develop Career in Dynamic Organization in a Challenging Environment where I can Utilize my Professional Skills and Capabilities of Personal Achievements and Organizational Objectives

Certificates

- Directorate of Floriculture (**Training & Research**) Government of the Punjab, Agriculture Department, Ayub Agricultural Research Institute Faisalabad Pakistan
- Serving as **Vice-Coordinator** in the Department of “Living Services” from September, 2019 at Volunteer Center, International College, Huazhong Agricultural University (VCIC-HZAU) Wuhan, China
- Served as **Volunteer** in the Department of “Living Services” from 2018-2019 at Volunteer Center, International College, Huazhong Agricultural University (VCIC-HZAU) Wuhan, China
- Served as a **Team Member** of Ayub Research XI from 2016-2017 at Different Cricket Clubs of Faisalabad.
- Served as Researcher in Botanical Society of America in 2016 at Department of Botany, Government College University, Faisalabad Pakistan

Recommendations

Prof. Dr. Lijun Liu Associate Professor at Huazhong Agricultural University, Wuhan China Master's Supervisor Post-Doc: University of Western Australia, Australia Email: liulijun@mail.hzau.edu.cn	Prof. Dr. Shafaqat Ali Head of Department at Department of Environmental Sciences and Engineering, Government College University, Faisalabad, Pakistan Editor in Scientific Reports and Journal of Chemistry Email: shafaqataligill@yahoo.com
Prof. Dr. Shah Fahad Associate Professor at Department of Agriculture, University of Sawabi, KPK Pakistan Editor in Scientific Reports and Environmental Science and Pollution Research Email: shah_fahad80@yahoo.com	Prof. Dr. Sadam Hussain Associate Professor at Department of Agronomy, University of Agriculture, Faisalabad, Pakistan Editor in Planta Daninha and PLOS ONE Email: sadamhussainuaf@gmail.com