Muhammad Hamzah Saleem

Personal details

Father's Name	Muhammad Saleem
Date of Birth	1993-12-15
Nationality	Pakistani
Passport #	HR5753661
Major	Crop Cultivation and Farming System
Address	Shizishan Street # 1, Hongshan District, Huazhong Agricultural University, Wuhan 430070, Hubei, P.R. China
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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

- **Muhammad Hamzah Saleem**, Shah Fahad, Shahid Ullah Khan, Sunny Ahmar, Muhammad Hafeez Ullah Khan, Zahid Maqbool, Muzammal Rehman, Lijun Liu (2019) 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 4.52**) (**On line**) https://doi.org/10.1016/j.ecoenv.2019.109915
- **Muhammad Hamzah Saleem**, Muzammal Rehman, Muhammad Zahid, Muhammad Imran, Wei Xiang, Lijun Liu (2019) Morphological changes and antioxidative capacity of jute (*Corchorus capsularis*, Malvacea) under different color light emitting diodes (Brazilian Journal of Botany) (**IF 0.95**) (**Accepted**)
- Muzammal Rehman, Lijun Liu, Saqib Bashir, **Muhammad Hamzah Saleem**, Chen Chen, Dingxiang Peng, Kadambot HM. Siddique (2019) Influence of rice straw biochar on growth, antioxidant capacity and copper uptake in ramie (*Boehmeria nivea* L.) grown as forage in

aged copper contaminated soil (Plant Physiology and Biochemistry) (**IF 3.40**) (**On line**) https://doi.org/10.1016/j.plaphy.2019.02.021

- Muzammal Rehman, Lijun Liu, Qin Wang, **Muhammad Hamzah Saleem**, Saqib Bashir, Sana Ullah, Dingxiang Peng (2019) Copper environmental toxicology, recent advances, and future outlook: a review (Environmental Science and Pollution Research) (**IF 2.91**) (**On line**) https://doi.org/10.1007/s11356-019-05073-6
- Muhammad Imran, Xuecheng Sun, Saddam Hussain, Usman Ali, Muhammad Shoaib Rana, Fahd Rasul, **Muhammad Hamzah Saleem**, Mohamed G. Moussa, Parashuram Bhantana, Javaria Afzal, Ali Mohamed Elyamine, Cheng Xiao Hu (2019) Molybdenum-Induced Effects on Nitrogen Metabolism Enzymes and Elemental Profile of Winter Wheat (*Triticum aestivum* L.) Under Different Nitrogen Sources (International Journal of Molecular Sciences) (**IF 4.18**) (**On line**) doi:10.3390/ijms20123009

Submitted Articles

- **Muhammad Hamzah Saleem,** Shah Fahad, Shahid Ullah Khan, Mairaj Din, Abid Ullah, Ayman EL Sabagh, Akbar Hossain, Analía Llanes, Lijun Liu (2019) Copper induced oxidative stress, initiation of antioxidants and phytoremediation potential of flax (*Linum usitatissimum* L.) seedlings grown under the mixing of two different soils of China (Environmental Science and Pollution Research) (**IF 2.91**) (**Revision Submitted**)
- **Muhammad Hamzah Saleem**, Muzammal Rehman, Muhammad Kamran, Javaria Afzal, Hamza Armghan Noushahi, Lijun Liu (2019) Investigating the potential of different Jute varieties for phytoremediation of copper contaminated soil collected from Hubei, China (Environmental Science and Pollution Research) (IF **2.91**) (**Revision Submitted**)
- **Muhammad Hamzah Saleem**, Muhammad Rizwan, Shafaqat Ali, Muzammal Rehman, Lijun Liu (2019) Individual and combinatorial application of EDTA and citric acid assisted phytoextraction of copper using fibrous crop (Ecotoxicology and Environmental Safety) (**IF 4.52**) (**Under Review**)
- **Muhammad Hamzah Saleem**, Muhammad Kamran, Muzammal Rehman, Aasma Parveen, Sunny Ahmar, Muhammad Hafeez Ullah Khan, Bo Wang, Lijun Liu (2019) Morpho-physiological, biochemical, gaseous exchange response sand copper accumulation potential of Flax (*Linum usitatissimum* L.) grown in a soil spiked differentially with copper (Journal of Environmental Management) (**IF 4.86**) (**Under Review**)
- **Muhammad Hamzah Saleem**, Saddam Hussain, Muzammal Rehaman, Muhammad Sohaib Chattha, Lijun Liu (2019) *Linum usitatissimum* (Flax): whether a potential candidate for phytoremediation? Biological and economical point of view (International Journal of Phytoremediation) (**IF 2.23**) (**Under Review**)

- **Muhammad Hamzah Saleem**, Muzammal Rehman, Shafaqat Ali, Muhammad Rizwan, Sana Irshad, Fahad Shafiq, Muhammad Iqbal, Lijun Liu (2019) Jute: A potential candidate for phytoremediation—A literature review (Plants) (**IF 2.63**) (**Under Review**)
- **Muhammad Hamzah Saleem**, Shah Fahad, Muzammal Rehman, Shahbaz Atta Tung, Naeem Iqbal, Amara Hassan, Atif Ayub, Muhammad Ashfaq Wahid, Shadab Shaukat, Lijun Liu (2019) Leaf gas exchange, antioxidative capacity and physiological attributes of rapeseed (*Brassica napus* L.) grown under different light emitting diodes (Photosynthetica) (**IF 2.36**) (**Under Review**)
- Muzammal Rehman, **Muhammad Hamzah Saleem**, Gang Deng, Saqib Bashir, Sumera Anwar, Mu hammad Ikram, Dingxiang Peng, Feihu Liu, Lijun Liu (2019) Interactive effect of rice straw biochar and nitrogen fertilizer on ramie (*Boehmeria nivea* L.) growth and post-harvest soil characteristics in highly copper contaminated soil (Ecotoxicology and Environmental Safety) (**IF 4.52**) (**Under Review**)
- Muzammal Rehman, Gang Deng, **Muhammad Hamzah Saleem**, Saif Ali, Muhammad Hafeez, Lijun Liu, Fiehu Liu (2019) Morpho-physiological traits, antioxidant capacity and nitrogen metabolism in *Boehmeria nivea* L. under varying levels of nitrogen fertilization (Journal of Plant Physiology) (**IF 2.82**) (**Under Review**)
- Muhammad Kamran, Aasma Parveen, Sunny Ahmar, Zaffar Malik, Sajid Hussain, Muhammad Sohaib Chattha, **Muhammad Hamzah Saleem**, Muhammad Adil, Parviz Heidari, Jen-Tsung Chen (2019) Selenium supply induces salinity tolerance in crops - a review (International Journal of Molecular Sciences) (**IF 4.18**) (**Under Review**)
- Sunny Ahmar, Sumbul Saeed, Muhammad Hafeez Khan, Muhammad Ikram, Shahid Ullah Khan, Wasim Ullah Khan, Muhammad Kamran, **Muhammad Hamzah Saleem**, Hafiz Ishfaq Ahmad, Aroosha Faheem, Shah Fahad, Ahmad Ali, Qazi Shoaib Ali, Tawfik A Salah (2019) Genome editing: A successful Journey from EMNs to CRSPR: Praise and Stargaze (Journal of Plant Research) (**IF 2.08**) (**Under Review**)
- Amara Hassan, **Muhammad Hamzah Saleem**, Mobeen, Ambreen Gul, Farheen Gohar, Maria Iqbal, Aqsa Naseem, Farah Saeed, Sunaira Urooj (2019) Oxidative stress alleviation as indicated by enzymatic and non-enzymatic antioxidants and osmoregulators in barley (*Hordeum vulgare*) under salt (NaCl) stress by ascorbic acid (AsA) (Brazilian Journal of Botany) (**IF 0.95**) (**Under Review**)
- Mobeen, **Muhammad Hamzah Saleem**, Amara Hassan, Ambreen Gul, Sidra Hameed (2019) A correlation between proximate, nutrients and anti-nutrients analysis of some common leafy vegetables collected from market and horticulture garden of Pakistan (Brazilian Journal of Botany) (**IF 0.95**) (**Submitted to Journal**)
- Ambreen Gul, **Muhammad Hamzah Saleem**, Javaria Afzal, Amara Hassan, Mobeen, Farheen Gohar, Maria Iqbal, Anni Maryam Afzal (2019) Foliar application of allelopathic extract to study morpho-physiological traits and antioxidative response of *Zea mays* and *Vigna radiata* under saline soil (Brazilian Journal of Botany) (**IF 0.95**) (**Submitted to Journal**)

- Amara Hassan, **Muhammad Hamzah Saleem**, Mobeen, Shah Fahad, Shahid Ullah Khan (2019) Ascorbic acid application mitigates oxidative stress and ameliorates morpho-physiological traits and nutrients uptake in barley (*Hordeum vulgare* L.) under saline soil (Acta Physiologiae Plantrum) (**IF 1.60**) (**Editor Assigned**)

Dissertation Topic (In Masters)

- **Growth, Fiber Quality and Phytoremediation potential of Jute and Flax grown in rotation under Copper contaminated Soil**

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-Cont.	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
- Soil Physics
- 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 July, 2020 at Pakistan)

Research Progress

- 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

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 (**H_2O_2**)
- Electrolyte Leakage (**EL**)
- IRGRA (**Photosynthesis**)
- Morphological traits

Software

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

Awards

- Winner of **"Chinese Government Scholarship (CGS) Funded by China Scholarship Council (CSC)"** from 2017-2020 for master degree research (Continued)
- Candidate of "**Distinguished Scholar**" at Huazhong Agricultural University on the basis of Research Articles
- 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** Email: sadamhussainuaf@gmail.com