

Zohaib ur Rehman Bughio

Department of Soil Science,
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1-RESEARCH INTEREST

- Plant Nutrition
- Micronutrients Fertilization
- Heavy Metals Pollution
- Agricultural Waste Recycling and Utilization

2-EDUCATION

MSc. Agri. (Hons.) Soil Science (CGPA: 4.00/4.00) 2017–2019

Sindh Agriculture University Tando Jam, Pakistan

Major Courses: Soil Fertility, Soil Microbiology, Soil Taxonomy, Soil Physics, Soil Mineralogy

B.Sc. Agri. (Hons.) Soil Science (87.8% Marks) 2012-2016

Sindh Agriculture University Tando Jam, Pakistan

Major Courses: Soil Fertility, Soil Microbiology, Soil Chemistry, Plant Physiology, Soil Mineralogy, Environmental Pollution, Agro and Land Waste Management, Statistics

3-AWARDS/ DISTINCTIONS (07)

1. **Chancellor's Silver Medal** for securing 1st position in M.Sc. (Agri.) Hons.
2. **Chancellor's Gold Medal** for securing 1st position in B.Sc. (Agri.) Hons.
3. **1st position in M.Sc. (Agri.) Hons.** In the department of Soil Science.
4. **1st position in B.Sc. (Agri.) Hons.** In the department of Soil Science.
5. **Student Talent Awards** for best performance in 1st, 2nd, 3rd year of B.Sc. (Agri.) Hons.
6. **Merit Scholarship** by Pakistan Atomic Energy Commission (PAEC).
7. **A-1 Achievers award** by St. Bonaventure's High School Hyderabad.

4-RESEARCH WORK AND EXPERIENCE

Research Assistant 2017-2019

Soil and Environmental Sciences Lab, Sindh Agriculture University Tandojam

Research Areas:

- Zn fertilization in cereals (Rice and Wheat)
- Arsenic and Cadmium contamination in water

- Composting of Agricultural Waste

M.Sc. (Agri.) Hons. Research

2017-2018

Dissertation Topic: Zinc biofortification in selected rice (*Oryza sativa* L.) genotypes through zinc application methods

B.Sc. (Agri.) Hons. Research Internship

Six months

Title: Survey and assessment of metal buildup in fields irrigated with untreated waste water

Activities Involved: Field Survey, Sampling and physico-chemical analysis of plant, soil and waste water samples, and Report writing

Mini Project (703)

Three months

Title: Effects of organic and inorganic fertilizers on Maize growth

Activities Involved: Pot experiment, data collection, statistical analysis of data and report writing

Mini Project (603)

Six months

Title: Preparation and analysis of composts prepared from animal manures and vegetable waste

Activities Involved: Collection of materials, compost Preparation, compost sampling, compost analysis, statistical analysis of data and report writing

5- PUBLICATIONS

5.1 JOURNAL PUBLISHED ARTICLES

(01)

1. J. A. ABBASI, A. W. GANDAH, M. SALEEM, S. M. BHATTI, and **Z. R. BUGHIO**. 2019. Growth and development of guava (*Psidium guajava* L.) seedlings against sodium chloride salinized water. *Pakistan Journal of Agriculture, Agricultural Engineering and Veterinary Sciences*, 35(2): 81-85.

5.2 JOURNAL SUBMITTED ARTICLES (In Review Process)

(02)

1. **Z. R. BUGHIO**, S. M. BHATTI, N. Depar, I. Rajpar, H. R. Bughio and M. S. Sarki. Enhancement of Zn concentration and bioavailability in rice grains by Zn application methods. Submitted to *Journal of Plant Nutrition* on 25 November, 2019.
2. S. M. BHATTI, **Z. R. BUGHIO**, M. A. PANHWAR, M. S. SARKI, A. W. GANDAH, and N. A. WAHOCHO. Influence of foliar application of zinc on growth, yield and Zn concentration in strawberry. Submitted to *Pakistan Journal of Botany* on 20th November, 2019.

5.3 PAPERS AND ABSTRACTS IN CONFERENCE PROCEEDINGS

(10)

1. **Z. R. Bughio**, S. M. Bhatti, I. Rajpar, N. Depar, H. R Bughio, and I. A. Odhano (2020). “Assessment of zinc fertilization techniques for effective Zn biofortification in rice crop”. In: Abstract Book of 18th International Congress of Soil Science (11-13 February, 2020) Sindh Agriculture University Tando Jam, Pakistan (Page 186).
2. M. A. Kandhro, S. M. Bhatti, I. Rajpar, J. A. Shah, **Z. R. Bughio** and M. M. Lund (2020). Comparative performance of composts and NPK fertilizer on growth and quality of maize fodder. In: Abstract Book of 18th International Congress of Soil Science (11-13 February, 2020), Sindh Agriculture University Tando Jam, Pakistan (Page 138).
3. N. K. Katyar, S.A. Qureshi, M. S. Sarki, N. A. Deho, and **Z. R. Bughio** (2020) Stimulation effects of amino acids application on growth and yield of wheat crop. In: Abstract Book of 18th International Congress of Soil Science (11-13 February, 2020), Sindh Agriculture University Tando Jam, Pakistan (Page 159).
4. Z. A. Mari, S. M. Bhatti, I. Rajpar, N. Depar, and **Z. R. Bughio** (2020). Appraisal of chelated Iron in enhancing growth yield and iron concentration in bread wheat grains. In: Abstract Book of 18th International Congress of Soil Science (11-13 February, 2020), Sindh Agriculture University Tando Jam, Pakistan (Page 188).
5. A. Syed, Z. A. Khan, S. H. Chatta, **Z. R. Bughio**, and I. A. Sheikh (2020). Efficiency and performance of hydroponic unit for spinach cultivation. In: Abstract Book of 18th International Congress of Soil Science (11-13 February, 2020), Sindh Agriculture University Tando Jam, Pakistan (Page 254).
6. S. Arain, M. Saleem, S. M. Bhatti, **Z. R. Bughio**, and Z. A. Lashari (2020). Influence of organic and inorganic fertilization on growth and yield of bottle gourd. In: Abstract Book of 18th International Congress of Soil Science (11-13 February, 2020), Sindh Agriculture University Tando Jam, Pakistan (Page, 460).
7. Z. A. Lashari, M. Saleem, A. W. Gandahi, **Z. R. Bughio**, and S. Arain. (2020). Growth and yield of onion as influenced by organic and inorganic fertilization. In: Abstract Book of 18th International Congress of Soil Science (11-13 February, 2020), Sindh Agriculture University Tando Jam, Pakistan (Page, 473).
8. Bughio, A. L. Qureshi, R. K. Soothar and **Z. R. Bughio** (2019). Development of crop coefficient for wheat crop under various soil moisture depletion levels. In: Abstract book

of 1st International Conference Agricultural Engineering and Technologies (5-6 November, 2019) Sindh Agriculture University Tando Jam, Pakistan (Page, 25).

9. S. M. Bhatti, M. S. Khokhar, I. Rajpar, Q. A. Panhwar, and **Z. R. Bughio** (2019). Recycling of banana plant residues for nutrient rich compost”. In the abstract book of 3rd Young Researchers National Conference on Water and Environment (5-6 September, 2019) Mehran University of Engineering and Technology Jamshoro, Pakistan. (Page, 27).
10. **Z. R. Bughio**, S. M. Bhatti, I. Rajpar, N. Depar, H. R. Bughio and M. A. Akram (2019). “Can agronomic biofortification of rice alleviate zinc malnutrition?” In abstract book of 4th International Conference on Agriculture, Food and Animal Sciences (21-22 January, 2019) Sindh Agriculture University Tando Jam, Pakistan.

6-CONFERENCES/ SEMINARS/ WORKSHOPS PARTICIPATION

6.1 NATIONAL/ INTERNATIONAL (where oral/poster presentation was made) (04)

1. **18th International Congress of Soil Science**, (11-13 February, 2020), Sindh Agriculture University Tando Jam, Pakistan.
2. **1st International Conference Agricultural Engineering and Technologies**, (5-6 November, 2019) Sindh Agriculture University Tando Jam, Pakistan
3. **3rd Young Researchers National Conference on Water and Environment**, (5-6 September, 2019), U.S-Pakistan Center for Advanced Studies in Water, MUET Jamshoro, Pakistan.
4. 4th international conference on “**Agriculture, Food and Animal Sciences**” at Sindh Agriculture University Tandojam (21-22 January, 2019).

6.2 NATIONAL/ INTERNATIONAL (Attended only) (06)

1. Attended Special Seminar on “**Alternative Plant Nutrient Sources for Higher Crop Yields under Changing Climate**” at Sindh Agriculture University Tandojam.
2. Attended 17th International Congress of Soil Science, “**Soil: Ultimate Solution of Food Security and Climate Change**” at Faisalabad Pakistan
3. Attended 6th National Workshop on “**Practical Approaches for the Identification of Stress Tolerance Plants**” at Nuclear Institute of Agriculture (NIA), Tando Jam.

4. Attended Special Seminar on “**Soil and Nutrients Management for Sustainable Agriculture**” at Sindh Agriculture University Tandojam
5. Attended International Seminar On “**Potassium for Sustainable Crop Production in Pakistan**” at Sindh Agriculture University Tandojam.
6. Attended 4th National Workshop on “**Nutrient Management for Better Crop Production**” at nuclear institute of Agriculture (NIA), Tando Jam.

7- ONLINE COURSES

- Completed online learning course: **Introductory E-Course on Climate Change** offered by United Nations Institute for Training and Research
- Completed online learning course: **How to Write and Publish a Scientific Paper (Project-Centered Course)** through Coursera
- Completed online learning course: **Municipal Solid Waste Management in Developing Countries** through Coursera
- Completed online learning course: **Discover Best Farming Practices for Sustainable 2050** through Coursera.
- Completed online learning course: **Agriculture, Economics and Nature** through Coursera.

8- PROFESSIONAL AFFILIATIONS

- **Professional member** of Soil Science Society of Pakistan.
- **Professional member** of American Society for Microbiology
- **Life time member of** Scientific and Technical Research Association (STRA)