CURRICULUM VITAE

1. Personal information

Name : **MUHAMMAD SAJIDUR RAHMAN**
Father's name : Muhammad Mahbubur Rahman
Mother's name : Munira Rahman
Date of birth : January 01, 1974
Nationality : Bangladeshi
Employment : Principal Scientific Officer
Soil Science Division
Bangladesh Rice Research Institute (BRRI), Gazipur, Bangladesh
Present address : Principal Scientific Officer
Soil Science Division
Bangladesh Rice Research Institute, Gazipur 1701, Bangladesh
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2. Educational qualification

Degree	Education Board/ University	Year	Major	Division/ Class
Secondary School Certificate	Dhaka	1989	Science	First
Higher Secondary Certificate	Dhaka	1991	Science	First
B. Sc. (Honours)	Dhaka University	1995	Soil Science	First
M. Sc. (Thesis group)	Dhaka University	1996	Soil Science	First
Ph. D.	Dhaka University	2021	Soil Science	-

3. Job experiences and qualification

3.1 Employment:

Designation	Duration	Department	Organization
Research Officer	January, 1998 to May, 2000	Department of Soil, Water and Environment	Dhaka University, Dhaka
Research Officer	July, 2000 to Dec., 2000	Department of Soil, Water and Environment	Dhaka University, Dhaka
Senior Scientific Officer	July 28, 2002 to Dec. 2014	Soil Science Division	Bangladesh Rice Research Institute (BRRI), Gazipur, Bangladesh
Principal Scientific Officer	Dec., 2014 to date	Soil Science Division	Bangladesh Rice Research Institute (BRRI), Gazipur, Bangladesh

3.2 Area of research:
Soil fertility and plant nutrition, Rice plant nutrition, Arsenic contamination, Soil chemistry, Analytical chemistry.
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4 Other related information

4.1 Membership
- Life member, Soil Science Society of Bangladesh.
- Member, Bangladesh Association for Advancement of Science (BAAS).
- Member, EDAPHOS- Ex-Students' Association of Dept. of Soil Science, DU.

4.2 Language skill: Bangla: Mother tongue; English: Good (IELTS Band total: 7.0)

5 Training information:

Training Title	Date	Organizer	Venue
Trace metal analysis and atomic absorption spectroscopy	09-10 Nov., 2002	Department of Soil, Water and Environment, Dhaka University & ACIAR-Australia	Dhaka University, Dhaka, Bangladesh
Specialized training on Arsenic contamination and mitigation	18-23 Dec., 2004	International Training Network (ITN), BUET, Dhaka.	BUET, Dhaka.
Use and maintenance of UV/VIS and infra-red Spectrophotometer	10-15 Nov., 2007	Network of Instrument Technical Personnel and User Scientists Bangladesh (NITUB), Department of Chemistry, Dhaka University	Department of Chemistry, Dhaka University, Dhaka
Use of Fertilizer Inspection Manual	02-04 June, 2008	Bangladesh Agricultural Research Council (BARC)	BARC, Dhaka
Foundation Training Course for NARS Scientists (Batch-19)	27 Jan.-24 May, 2009	Bangladesh Agricultural Research Council	BARD, Comilla
The use of CHNS/O Elemental Analyzer	07-09 October 2009	Exeter Analytical Lab	Exeter Analytical Lab, Coventry, United Kingdom
One Month Rice Production Training Course	21 March-19 April, 2010	BRRI	BRRI, Gazipur
Soil Fertility and Fertilizer Management for Crops and Cropping Patterns	2012	Bangladesh Agricultural Research Council (BARC)	BARC, Dhaka
Innovation in Public Service	22-28 Sept. 2018	a2i, GOB	BRRI, Gazipur

Administrative and financial management	24 Oct - 09 Nov. 2018	NATP, Bangladesh Agricultural Research Council	BARD, Comilla
Refreshing training on e-nothi management	11-12 Feb. 2019	a2i, GOB	ICT Dept., Agargaon, Dhaka
Modern Office Management	11-15 Oct. 2020	NATA	NATA
Introduction to ISO standards for laboratory accrediation	13-17 Sept. 2020	BRRI	BRRI
Hands on training on AAS, HPLC, LCMS and ICP	21 Dec, 2020 - 01 Jan. 2021	BRRI	BRRI
Project Development and Management	3-8 April 2021	NATP	BARC
Hands on training on Laboratory Management	6-17 June 2021	BRRI	BRRI

5.2 Participated In-Country International Workshop/Conference:

Title	Date	Venue	Organizer
International conference on Understanding Arsenic Behaviour in Aquifer, Soils and Plants: Implications for Management	16-18 Jan., 2005	Dhaka	CIMMYT, Cornell University, Texas A&M University, USGS, GSB
International workshop on Balanced fertilization for increasing and sustaining crop production	30 Mar-01 Apr. 2008	Dhaka	International Potash Institute.

6 Publications:

6.1 Scientific Journals (11):

MS Rahman and GH Rashid. 2002. Nitrogen Mineralization at Different Moisture Levels in Soils under Wheat-Rice Cropping Systems. Comm. Soil Sci. Plant. Anal. 33: 1363-1374.

M.S. Rahman, MAM Miah, ZU Ahmed, HM Khaled and G.H. Rashid. 2005. Spatial variability of Arsenic in soil and rice in an arsenic contaminated area of Bangladesh. Dhaka Univ. J. Biol. Sci. 14 (1):81-90.

MS Rahman, MAM Miah, MA Aziz, MH Rashid and ZU Ahmed. 2005. Spatial variability of pH, organic matter and micronutrients in paddy soils. J. Sci. Foundation. 3:137-145.

R Mahmud, N Inoue, S Kasajima, M Kato, R Shaheen, MAM Miah and **MS Rahman**. 2006. Response of common buckwheat and castor oil plant against different levels of soil arsenic concentration: A comparative study. Fagopyrum 23: 45-51.

R Mahmud, N Inoue, and **MS Rahman**. 2007. Effect of soil arsenic on plant yield and arsenic accumulation, and arsenic and phosphorus distribution in buckwheat and castor oil plant. Fagopyrum 24: 33-39.

AL Shah, **MS Rahman** and MA Aziz. 2008. Outlook for fertilizer consumption and food production in Bangladesh. Bangladesh J. Agric. and Environ. 4 (Special Issue): 9-26.

PK Saha, MAM Miah, **MS Rahman** and A Islam. 2008. Release pattern of NH_4^+-N from prilled urea and urea super granule under wetland rice cultivation. Bangladesh J. Agril. Res. 33: 271-276.

MAM Miah, ZU Ahmed, **MS Rahman**, HM Khaled, GM Panaullah, RH Loeppert, JM Duxbury and CA Meisner. 2008. Assessment of the impact of arsenic containing irrigation water on soil contamination and plant uptake. Bang. J. Sci. Res. 21: 35-41.

M. S. Rahman, A.L. Shah, M. Ishaque and **M.S. Rahman**. 2010. Mineralogical Composition of Bangladesh Rice Research Institute Farm Soils. Bang. Rice J. 15: 7-15.

M. S. Rahman, M. A. Mazid Miah, H. M. Khaled, A. Islam and G. M. Panaullah. 2010. Arsenic Concentration in Ground Water, Soils And Irrigated Rice in South-Western Bangladesh. Comm. Soil Sci. Plant Anal. 41: 1889–1895.

M S Rahman, MN Islam, M Z Hassan, SA Islam and SK Zaman. 2014. Impact of water management on the arsenic content of rice grain and cultivated soil in an Arsenic contaminated area of Bangladesh. J. Environ. Sci. Nat. Res. 7: 43-46.

6.2 Abstracts/ extended abstracts in Conference proceedings (8):

MAM Miah, MA Islam, ZU Ahmed, **MS Rahman** and HM Khaled. Fractionation and availability of arsenic in soils irrigated with arsenic contaminated ground water. Proc. 7th International Conference on the Biogeochemistry of Trace Elements (ICOBTE). Uppsala, Sweden. June 15-19, 2003. pp. 94-95.

MAM Miah, ZU Ahmed, **MS Rahman**, HM Khaled, GM Panaullah, RH Loeppert, JM Duxbury and CA Meisner. Spatial variability of arsenic in soil and rice irrigated with high arsenic content shallow tube well water. Proc. 10th International congress of Soil Science, Sindh Agricultural University, Tendojam, Pakistan. March 16-19. 2004. pp. 37.

MAM Miah, ZU Ahmed, **M.S. Rahman**, HM Khaled, GM Panaullah, RH Loeppert, JM Duxbury and CA Meisner. 2004. Assessment of the impact of arsenic containing irrigation water on soil contamination and plant uptake. Bangladesh Proc. 4th International Crop Science Congress. Brisbane, Australia, Sept 26- Oct. 1, 2004.

M. S. Rahman, H. M. Khaled, A. Islam, M.A.M. Miah, G.M. Panaullah , R. H. Loeppert, J. M. Duxbury and C. A. Meisner. 2005. Arsenic concentrations in water, soil and crops of

South-western Bangladesh. Proc. 8th International Conference on the Biogeochemistry of Trace Elements (ICOBTE), Adelaide, Australia, April 3-7, 2005.

H. M. Khaled, **M. S. Rahman**, M. A. Mazid Miah and G. M. Panaullah. Vertical distribution of soil arsenic and some selected properties in a rice field irrigated with As-contaminated water. Proc. 8th International Conference on the Biogeochemistry of Trace Elements (ICOBTE), Adelaide, Australia, April 3-7, 2005.

MAM Miah, **MS Rahman**, A Islam, DNR Paul, ATM Farid, M Jahiruddin, MA Sattar, GM Panaullah, CA Meisner, RH Loeppert and JM Duxbury. 2005. Nationwide Survey of Arsenic in Soils, Water and Crops in Bangladesh. Proc. Int. Symposium on Behaviour of Arsenic in Aquifers, Soils and Plants: Implications for Management. Dhaka, Bangladesh. January 16-18, 2005.

MS Rahman and A Islam. 2010. Arsenic problem and challenges for mitigaiton. Proc. Research Review and Program Planning Workshop of Soils Program of NARS Institutes (held in 2009). BARC, Dhaka.

MS Rahman, M. Akter, SMM Islam, PK Saha and AL Shah. 2011 . Effect of continuous wetalnd intensive rice cropping on soil fertility and productivity. Proc. Research Review and Program Planning Workshop of Soils Program of NARS Institutes (held in 2010). BARC, Dhaka.

6.3 Dissertation: M. Sc. (Soil Science)

M. S. Rahman. 2000. Effects of cropping systems on the mineralization of carbon and nitrogen in soils from Sonatala series. Department of Soil, Water and Environment, Dhaka University, Dhaka, Bangladesh. M. Sc. Thesis.

6.4 Dissertation: Doctor of Philosophy (Soil Science)

M. S. Rahman. 2021. Transformation and Availability of Zinc and Boron to Rice, Wheat and Jute Crops in Ganges River Floodplain Soils. Department of Soil, Water and Environment, Dhaka University, Dhaka, Bangladesh. Ph D Thesis.

7. List of Notable Research Contribution

7.1 Association to major projects

a. Impact of Arsenic Contamination on Agricultural Sustainability and Food Quality (USAID funded) jointly executed by BRRI, Cornell University, Texas A&M University and CIMMYT Bangladesh (Working Scientist: October 2002-June 2005).

b. Coordinated Project on Arsenic in Soil-Water-Plant Systems (co-ordinated by Bangladesh Agricultural Research Council, Ministry of Agriculture, Govt. of Bangladesh): Acted as Principal Investigator from May, 2011 to June, 2012. Contributed in preparation of the same Project.

c. Planned and prepared Development Project Proposal for 'Modernization of Soil Science Analytical Laboratory of BRRI' project (2007-2008) funded by MoA, GOB.

7.2 Involvement in the development, validation, refinement of the following technologies developed by BRRI

1. Mitigation of arsenic in soil plant system through alternative cultivation methods
2. GIS based map of soil fertility as a tool for nutrient management of rice soils.
3. Potassium fertilizer management in wetland rice.

4. Identification of location specific rice cultivation problem and maximizing rice yield through BRRI technologies.

7.3 List of major research programs developed, supervised and executed

1. Nutrient management studies in Barisal and Kushtia.
2. Nutrient use efficiency in MV and hybrid rice.
2. Nationwide survey for assessing arsenic status in soil, water and crop samples.
3. Spatial variability of arsenic in soil irrigated by shallow tube well water.
4. Arsenic tolerant rice variety development in Bangladesh.
5. Arsenic concentrations in groundwater, soils and irrigated rice in South-West Bangladesh.
6. Mitigation of As problem in rice field with different management practices in As-contaminated areas (Comilla, Chandpur and Faridpur).
7. Survey on the status of soil micronutrients (iron, zinc, copper, boron and manganese) in AEZ 1, 9, 11, 12 and 28.
8. Response of wheat, jute and rice to Zn and B fertilization.
9. Availability of soil Zn and B from different fractions to wheat, jute and rice.

8. Administrative and financial management of BRRI Regional stations:

- Performed major role in administrative and financial management as a Head of BRRI Regionals stations Kushtia (Aug. 2017 to March 2019) and Gopalganj (April 2019 to Jan. 2020).
- Organized and executed research programs for technology development for improved rice production in the ecosystems of Barisal, Kushtia and Gopalganj.

9. Resource person in training program:

Performed as resource speaker in the following training courses:

- Training on the Use of Manual for Fertilizer Analysis organized by BARC and held in BRRI, 2003.
- Training on Modern Rice Production for the Agricultural Extension Officers, BRRI, 2018 and 2019.