

Curriculum Vitae of Anisur RAHMAN

PRESENT ADDRESS:

Department of Agronomy
Sher-e-Bangla Agricultural University,
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PRESENT POSITION: Professor

FIELD OF SPECIALIZATION:

Crop Science, Plant Stress Physiology, Field Crop Management, Organic Farming and Agronomic Research

Date of Birth: June 15, 1985

NID No.: 8655608779

Nationality: Bangladeshi

EDUCATIONAL BACKGROUND:

Exam Name	Name of Board/University	Major	Division/Grade	Year of Passing
PhD in Plant Nutrients and Abiotic Stress Tolerance	Ehime University, Matsuyama, Japan	Applied Bioresource Science	A (4.0 out of 4.0)	2016
Master of Science in Agronomy	Sher-e-Bangla Agricultural University, Dhaka, Bangladesh	Agronomy	A (3.80 out of 4.0)	June 2010
Bachelor of Science in Agriculture	Sher-e-Bangla Agricultural University, Dhaka, Bangladesh	Agriculture	A (3.85 out of 4.0)	2007
Higher Secondary Certificate	Board of Secondary and Higher Secondary Education, Comilla, Bangladesh	Science	1 st Division	2002
Secondary School Certificate	Board of Secondary and Higher Secondary Education, Comilla, Bangladesh	Science	1 st Division	2000

PROFESSIONAL EXPERIENCE:

Designation	From	To	Appointed Organization
Professor	December 15, 2022	Till date	Sher-e-Bangla Agricultural University, Dhaka
Associate Professor	December 15, 2018	December 14, 2022	Sher-e-Bangla Agricultural University, Dhaka
Assistant Professor	December 15, 2013	December 14, 2018	Sher-e-Bangla Agricultural University, Dhaka
Lecturer	December 15, 2011	December 14, 2013	Sher-e-Bangla Agricultural University, Dhaka
Agriculture Extension Officer (AEO)	December 1, 2010	December 14, 2011	Department of Agricultural Extension (Under the Ministry of Agriculture)

RESEARCH EXPERIENCE:

- More than 16 years of research experience in the field of Crop Science and Agronomy.

List of research projects:

1. Plant biometry and yield of wheat under salt stress conditions as influenced by halo-priming
Position: Principal Investigator
Funding Authority: Sher-e-Bangla Agricultural University Research System
Project Status: Completed
2. Impact of Plant Growth Regulators on Plant Biometry and Yield of Groundnut Under Salt Stress Conditions
Position: Principal Investigator
Funding Authority: Ministry of Science and Technology, Bangladesh
Project Status: Completed
3. Alleviation of salt stress in groundnut by biofertilizer application
Position : Principal Investigator
Funding Authority: Sher-e-Bangla Agricultural University Research System
Project Status: Completed
4. Performance and Economic Viability of Recently Released Rice Varieties in Lalmai-Hill Areas
Position: Researcher
Funding Authority: Bangladesh Academy for Rural Development, Cumilla
Project Status: Completed
5. Collection and Screening of Groundnut Germplasm to Evaluate their Stress Tolerance Mechanism under Salt Stress Conditions
Position: Principal Investigator
Funding Authority: Ministry of Science and Technology, Bangladesh
Project Status: Completed
6. Influence of marine water on growth and yield of rice
Position: Principal Investigator
Funding Authority: Sher-e-Bangla Agricultural University Research System
Project Status: Completed

PUBLICATIONS:

List of Thesis

1. **Rahman A** (2010) Weed control and yield of wheat as affected by *Brassica* allelopathy. Master Thesis, Department of Agronomy, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh
2. **Rahman A** (2016) Calcium and Manganese-induced abiotic stress tolerance in rice by coordinated action of antioxidant defense, glyoxalase system and nutrient homeostasis. Dissertation, The United Graduate School of Agricultural Sciences, Ehime University, Ehime, Japan.

List of Research Articles:

1. Rahman, A., Alam, M.U., Hossain, M.S., Mahmud, J.A., Nahar, K., Fujita, M. and Hasanuzzaman, M. (2023). Exogenous gallic acid confers salt tolerance in rice seedlings: modulation of ion homeostasis, osmoregulation, antioxidant defense, and methylglyoxal detoxification systems. *Agronomy*. **13**: 16.
2. Alam, M.U., Fujita, M., Nahar, K., **Rahman, A.**, Anee, T.I., Masud, A.A.C., Amin, A.K.M.R. and Hasanuzzaman, M. (2022). Seed priming upregulates antioxidant defense and glyoxalase systems to conferring simulated drought tolerance in wheat seedlings. *Plant Stress*. **6**: 100120.
3. Khanam, M.M., Nawal, N., Hasanuzzaman, N., Karim, M.F. and **Rahman, A.** (2022). Response of biochar on growth and yield of aman rice under salt stress. *Bangladesh Agron. J.* **25**(1): 105–113.
4. Khan, M.N.A., Hossain, M.B., P.K. Biswas, M.B., Amin, A.K.M.R. and **Rahman, A.** (2022). Influence of transplanting date on performance of *boro* rice varieties in lalmal-hill area. *SAARC J. Agric.* **20**(1): 143–155.
5. Nath, S.C.D., Masud, A.A.C., Rahman, M., Saha, T., Sathi, K.S., **Rahman, A.**, Khan, M.A.H. and Hasanuzzaman, M. (2022). Supplemental organic manures and foliar application of magic growth improve the productivity of transplanted rice with reduced application of chemical fertilizers. *Agric. Conspec. Sci.* **87**(2): 111–120.
6. Islam, M.R., Islam, M.M., Sarker, S.C., Ullah, M.J. and **Rahman, A.** (2022). Performances of *Boro* Rice as Affected by Different Concentrations of Marine Water. *Vietnam J. Agric. Sci.* **5**(1): 1326–1336.
7. Rahman, K., Rahman, M., Ahmed, N., Alam, M.M., **Rahman, A.**, Islam, M.M. and Hasanuzzaman, M. (2021). Morphophysiological changes and reactive oxygen species metabolism in *Corchorus olitorius* L. under different abiotic stresses. *Open Agric.* **6**: 549–562.
8. Biswas, P.K., Fatema, K. and **Rahman, A.** (2021). Influence of planting method and nitrogen dose on growth and yield of quinoa (*Chenopodium quinoa* Willd.). *Bangladesh Agron. J.* 2021, **24**(1): 83–92.
9. Mahmud, J.A., Hasanuzzaman, M., Nahar, K., **Rahman, A.** and Fujita, F. (2019). EDTA reduces cadmium toxicity in mustard (*Brassica juncea* L.) by enhancing metal chelation, antioxidant defense and glyoxalase systems. *Acta Agrobot.* **72**(2):1722.
10. Anee, T.I., Nahar, K., **Rahman, A.**, Mahmud, J.A., Bhuiyan, T.F., Alam, M.U., Fujita, M. and Hasanuzzaman, M. (2019) Oxidative damage and antioxidant defense in *Sesamum indicum* after different waterlogging durations. *Plants*. **8**: 196.
11. Hossain, M. S., Hasanuzzaman, M., **Rahman, A.**, Nahar, K., Mahmud, J.A. and Fujita, M. (2019). Heat shock-induced salt stress tolerance in lentil (*Lens culinaris* Medik.). *Russ. J. Plant Physiol.* **66**(3): 450–460.
12. Hasanuzzaman, M., Nahar, K., **Rahman, A.**, Inafuku, M., Oku, H. and Fujita, M. (2018). Exogenous nitric oxide donor and arginine provide protection against short-term drought stress in wheat seedlings. *Physiol.Mol. Biol. Plants* **24**(6): 993–1004.
13. Hasanuzzaman, M., Nahar, K., **Rahman, A.**, Mahmud, J.A., Alharby, H.F., Fujita, M. (2018). Exogenous glutathione attenuates lead-induced oxidative stress in wheat by improving antioxidant defense and physiological mechanisms. *J. Plant Interact.* **13**(1): 203–212.
14. Hossain, M.S., Alam, M.U., **Rahman, A.**, Hasanuzzaman, M., Nahar, K., Mahmud, J.A. and Fujita, M. (2017). Use of iso-osmotic solution to understand salt stress responses in lentil (*Lens culinaris* Medik.). *S. Afr. J. Bot.* **113**: 346–354.
15. Mahmud, J.A., Hasanuzzaman, M., Nahar, K., **Rahman, A.**, Hossain, M.S. and Fujita, M. (2017). Maleic acid assisted improvement of metal chelation and antioxidant metabolism confers chromium tolerance in *Brassica juncea* L. *Ecotoxicol. Environ. Saf.* **144**: 216–226.

16. Mahmud, J.A., Hasanuzzaman, M., Nahar, K., **Rahman, A.**, Hossain, M.S. and Fujita, M. (2017). γ -Aminobutyric acid (GABA) confers chromium stress tolerance in *Brassica juncea* L. by modulating the antioxidant defense and glyoxalase systems. *Ecotoxicology*. **26**(5): 675–690.
17. Mahmud, J.A., Hasanuzzaman, M., Nahar, K., **Rahman, A.** and Fujita, M. (2017) Relative tolerance of different species of *Brassica* to cadmium toxicity: Coordinated role of antioxidant defense and glyoxalase systems. *Plant Omics*. **10**(02): 107–117.
18. Nahar, K., Hasanuzzaman, M., Alam, M.M., **Rahman, A.**, Mahmud, J.A., Suzuki, T. and Fujita, M. (2017). Insights into spermine-induced combined high temperature and drought tolerance in mung bean: osmoregulation and roles of antioxidant and glyoxalase system. *Protoplasma* **254**: 445–460.
19. **Rahman, A.**, Nahar, K., Hasanuzzaman, M. and Fujita, M. (2016). Manganese-induced cadmium stress tolerance in rice seedlings: Coordinated action of antioxidant defense, glyoxalase system and nutrient homeostasis. *C. R. Biol.* 339(11–12): 467–474.
20. Nahar, K., Rahman, M., Hasanuzzaman, M., Alam, M.M., **Rahman, A.**, Suzuki, T. and Fujita, M. (2016). Physiological and biochemical mechanisms of spermine-induced cadmium stress tolerance in mung bean (*Vigna radiata* L.) seedlings. *Environ. Sci. Pollut. Res.* **23**: 21206–21218.
21. Masrufa, S., **Rahman, A.**, Hasanuzzaman, M., Anee, T.I., Ali, M.H. and Hasanuzzaman, M. (2016). Pre-planting hardening-induced variability in yield attributes and yield of inbreed and hybrid rice. *Bangladesh Agron. J.* **19**(1): 87–97.
22. **Rahman, A.**, Hossain, M.S., Mahmud, J.A., Nahar, K., Hasanuzzaman, M. and Fujita, M. (2016). Manganese-induced salt stress tolerance in rice seedlings: regulation of ion homeostasis, antioxidant defense and glyoxalasesystems. *Physiol. Mol. Biol. Plants*. **22**(3): 291–306.
23. Nahar, K., Hasanuzzaman, M., **Rahman, A.**, Alam, M.M., Mahmud, J.A., Suzuki, T. and Fujita, M. (2016). Polyamines confer salt tolerance in mung bean (*Vigna radiata* L.) by reducing sodium uptake, improving nutrient homeostasis, antioxidant defense, and methylglyoxal detoxification systems. *Front. Plant Sci.* **7**:1104.
24. **Rahman, A.**, Mostofa, M.G., Nahar, K., Hasanuzzaman, M. and Fujita, M. (2016). Exogenous calcium alleviates cadmium-induced oxidative stress in rice (*Oryza sativa* L.) seedlings by regulating the antioxidant defense and glyoxalase systems. *Braz. J. Bot.* **39**: 393–407.
25. **Rahman, A.**, Nahar, K., Hasanuzzaman, M. and Fujita, M. (2016). Calcium supplementation improves Na^+/K^+ ratio, antioxidant defense and glyoxalase systems in salt-stressed rice seedlings. *Front. Plant Sci.* **7**: 609.
26. Masrufa, S., **Rahman, A.**, Hasanuzzaman, M., Nath, S.C.D., Ali, M.H., Anee, T.I. and Hasanuzzaman, M. (2016). Effect of pre-planting hardening of seedlings on growth, dry matter accumulation and tillering of inbreed and hybrid rice. *Focus Sci.* **2**(2):1–11.
27. Nahar, K., Hasanuzzaman, M., Alam, M.M., **Rahman, A.**, Suzuki, T. and Fujita, M. (2016). Polyamine and nitricoxide crosstalk: Antagonistic effects on cadmium toxicity in mung bean plants through upregulating the metal detoxification, antioxidant defense and methylglyoxal detoxification systems. *Ecotoxicol. Environ. Saf.* **126**: 245–255.
28. **Rahman, A.**, Mostofa, M.G., Alam, M.M., Nahar, K., Hasanuzzaman and M. and Fujita, M. (2015). Calcium mitigates arsenic toxicity in rice seedlings by reducing arsenic uptake and modulating the antioxidant defense and glyoxalase systems and stress markers. *BioMed Res. Int.* **2015**: 340812.
29. Mostofa, M.G., **Rahman, A.**, Ansary, M.M.U., Watanabe, A., Fujita, M. and Tran, L.P. (2015). Hydrogen sulfide modulates cadmium-induced physiological and biochemical responses to alleviate cadmium toxicity in rice. *Sci. Rep.* **5**:14078.

30. Hasanuzzaman, M., Alam, M.M., **Rahman, A.**, Hasanuzzaman, M., Nahar, K. and Fujita, M. (2014). Exogenous proline and glycine betaine mediated upregulation of antioxidant defense and glyoxalase systems provides better protection against salt-induced oxidative stress in two rice (*Oryza sativa* L.) varieties. *BioMed Res. Int.* **2014**: 757219.
31. Al-Mamun, M.A., Biswas, P.K., Karim, M.F., Hasanuzzaman, M. and **Rahman, A.** (2013). Influence of rice straw and water hyacinth incorporation on the performance of boro rice. *Int. J. Bio-Resour. Stress Manag.* **4**(2): 209–213.
32. **Rahman, A.**, Biswas, P.K., Sardar, M.S.A., Hasanuzzaman, M. and Malek, M. (2012). Allelopathic effect of *Brassica* biomass on weed control and growth of wheat. *Bangladesh J. Weed Sci.* **3**(1&2): 05–10.
33. Al-Mamun, M.A., Biswas, P.K., Karim, M.F., Hasanuzzaman, M. **Rahman, A.** (2012). Allelopathic effect of rice straw and water hyacinth on weed control in boro rice. *Bangladesh J. Weed Sci.* **3**(1&2):11–18.
34. Azam, M.T., Ali, M.H., Karim, F.K., **Rahman, A.**, Jalal M.J., Mamun, A.F.M. (2012). Growth and yield of boro rice as affected by different urea fertilizer application method. *Int. J. Agric. Crop Sci.* **4**(3): 45–51.
35. **Rahman, A.**, Biswas, P.K., Sarder, M.S.A. and Khan, M.I.K. (2012). Allelopathic effect of *Brassica* biomass on yield of wheat. *J. Expt. Biosci.* **3**(2):13–18.
36. Jalal, M.J., Ullah, M.J., Hossain, H.M.T. and **Rahman, A.** (2012). Performance of aman rice as affected by storage durations of uprooted rice seedlings at different ages. *J.Expt. Biosci.* **3**(2): 79–74.
37. Debanath, A., Biswas, P.K., Sarder, M.S.A. and **Rahman, A.** (2012). Influence of mother and clonal tillers on yield performance of inbred and hybrid boro rice. *Bangladesh Agro. J.* **15**(1):1–7.
38. Jabin, U., Karim, M.F., Ullah, M.J., Hasanuzzaman, M., Masum, S.M. and **Rahman, A.** (2012). Response of mustard to the application method of prilled urea and urea supper granule. *Int. Res. J. Appl. Basic Sci.* **3**(12): 2529–2533.

LIST OF REVIEW ARTICLE

39. Hasanuzzaman, M., Nahar, K., Hossain, M.S., Mahmud, J.A., **Rahman, A.**, Inafuku, M., Oku, H. and Fujita, M. (2017). Coordinated actions of glyoxalase and antioxidant defense systems in conferring abiotic stress tolerance in plants. *Int. J. Mol. Sci.* **18**(1): 200.

LIST OF BOOK CHAPTERS

40. **Rahman, A.**, Nahar, K., Mahmud, J.A., Hasanuzzaman, M., Hossain, M.S. and Fujita, M. (2017). Salt stress tolerance in rice: Emerging role of exogenous phytoprotectants. **In:** Advances in International Rice Research. J. Li, (ed.). Intech, Rijeka, Croatia. pp. 139–174.
41. Hasanuzzaman, M., Nahar, K., **Rahman, A.**, Anee, T.I., Alam, M.U., Bhuiyan, T.F., Oku, H. and Fujita, M. (2017). Approaches to enhance salt stress tolerances in wheat. **In:** Wheat improvement, management and utilization. R. Wanyera and J. Owuoché,(ed.). Intech, Rijeka, Croatia. pp. 151–187.
42. Hasanuzzaman, M., Nahar, K., **Rahman, A.**, Mahmud, J.A., Hossain, S., Alam, K., Oku, H. and Fujita M. (2017.) Actions of Biological Trace Elements in Plant Abiotic Stress Tolerance. **In:** Essential Plant Nutrients. M, Naeem, A. Ansari, and S. Gill, (ed.). Springer, Switzerland. pp. 213–274.
43. Hasanuzzaman, M., Nahar, K., **Rahman, A.**, Mahmud, J.A., Hossain, M.S. and Fujita, M. (2016). Soybean production and environmental stresses. **In:** Environmental stresses in soybean production. M. Miransari, (ed.). Academic Press, Elsevier, Iran. pp. 61–102.

LIST OF BOOK

44. Biswas, P.K., **Rahman, A.**, Hossain, M.B. and Khan, M.N.A. (2021). Performance and economic viability of recently released rice varieties in lalmal-hill areas of Cumilla. BARD, Cumilla, Bangladesh.

List of Attended International Conferences

1. The 241st meeting of Crop Science Society of Japan, March 2016, Mito Japan
2. SEB Annual meeting 2016, Brighton, UK
3. Annual meeting, Plant Biology 2015, Minneapolis, Minnesota, USA
4. The 4th International Rice Congress 2014, Bangkok, Thailand

TRAINING/ WORKSHOP ACTIVITIES:

Subject	Duration	Institution	Sponsor
Workshop on Building Climate Resilience in Agriculture	May 05-09, 2019	National Productivity Organization, Ministry of Industries, Bangladesh	Asian Productivity Organization (APO)
Foundation Training for University Teachers	June 25- July 23, 2018	Graduate Training Institute, Bangladesh Agricultural University, Mymensingh	University Grants Commission of Bangladesh
Harmonizing Seed Testing Procedure	April 27-29, 2013	The Seed Testing Laboratory and Training Centre, BADC	Seed Wing, Ministry of Agriculture, Bangladesh
Mushroom Cultivation	September 25-29, 2011	National Mushroom Development & Extension Centre	Strengthening Mushroom Development Project
Soil Health Management	July 24-28, 2011	Central Extension Resources Development Institute (CERDI), Gazipur	Upgrading of NATA Project
Season-Long Training of Trainers (TOT) Course on Integrated Pest Management	January 29– May 18, 2011	Department of Agricultural Extension	IPM 2 nd Phase Project
Training of Trainers	December 6 –11, 2010	Central Extension Resources Development Institute (CERDI), Gazipur	Upgrading of NATA Project

SOCIETAL MEMBERSHIPS:

1. Member of the American Society of Plant Biologists
2. Member of the Crop Science Society of Japan
3. Member of the Bangladesh Society of Agronomy
4. Member of the Weed Science Society of Bangladesh
5. Member of the Seed Science Society of Bangladesh
6. Member of Institution of Agriculturist, Bangladesh.