

Curriculum Vitae

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Date of birth: 8/14/1992

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Educational Background:

1. Master of Science in Agronomy: January 2014 – June 2016
Department of Agronomy, Sher-e-Bangla Agricultural University, Dhaka-1207, Bangladesh
2. Bachelor of Science in Agriculture (Honours): January 2010 – December 2013
Sher-e-Bangla Agricultural University, Dhaka-1207, Bangladesh

Employment History:

- Assistant Professor (December 2020–till date): Department of Agronomy, Sher-e-Bangla Agricultural University, Dhaka-1207.
- Lecturer (December 2018–December 2010): Department of Agronomy, Sher-e-Bangla Agricultural University, Dhaka-1207.
- Project Director (July 2021–June 2022): “Mitigation of salt stress in napier grass by the supplementation of vermicompost and selenium” funded by Ministry of Science and Technology, Government of the people’s Republic of Bangladesh.
- Project Director (July 2020–June 2021): “Morpho-physiological and biochemical responses of napier grass under different durations of drought condition” funded by Ministry of Science and Technology, Government of the people’s Republic of Bangladesh.
- Associate Investigator (July 2020–June 2021): “Morpho-physiological responses of jute species under different abiotic stresses and understanding their tolerance mechanisms” funded by Ministry of Science and Technology, Government of the people’s Republic of Bangladesh.
- Research Associate (March 2017-September 2017): “Efficacy of macronutrients (K, Ca & Mg) in mitigating salt damages in rice (*Oryza sativa* L.)” funded by SAURES, Sher-e-Bangla Agricultural University, Dhaka-1207.
- Research Scholar (March 2016-February 2017): Laboratory of Plant Stress Responses, Department of Applied Biological Sciences, Kagawa University, Japan, funded by Japan Student Services Organization (JASSO), Government of Japan.
- Research Assistant (July 2014-December 2015): “Protective effect of nitric oxide and selenium in mitigating metal toxicity in wheat and mustard” funded by Ministry of Science and Technology, Government of the People’s Republic of Bangladesh.

Research activities and publication:

▪ Research articles

- (1) **Anee TI**, Rachman RR, Ziqi Z, Suzuki N (2025). A combination of salt stress and waterlogging provides protection to tomato plants against the negative effects of waterlogging individually applied. *Physiologia Plantarum*, In Press.
- (2) Oshita T, Sim J, **Anee TI**, Kiyono H, Nozu C, Suzuki N (2023). Attenuation of negative effects caused by a combination of heat and cadmium stress in *Arabidopsis thaliana*

- deficient in jasmonic acid synthesis. *Journal of Plant Physiology*, 281, 153915. <https://doi.org/10.1016/j.jplph.2023.153915>
- (3) Kaji M, Katano K, **Anee TI**, Nitta H, Yamaji R, Shimizu R, Shigaki S, Suzuki H, Suzuki N (2024) Response of *Arabidopsis thaliana* to Flooding with Physical Flow. *Plants*, 13(24). <https://doi.org/10.3390/plants13243508>
 - (4) **Anee TI**, Islam MNN, Hassan MM, Masud AAC, Alam MM, Hasanuzzaman M (2022). Organic amendments improve plant morpho-physiology and antioxidant metabolism in mitigating drought stress in bread wheat (*Triticum aestivum* L.). *Phyton-International Journal of Experimental Botany*. <https://doi.org/10.32604/phyton.2022.021137>
 - (5) **Anee TI**, Biswas PK, Hasanuzzaman M (2022). Changes in morpho-physiological and yield attributes of *Sesamum indicum* under waterlogging at different growth stages. *Journal of Bangladesh Academy of Science*, 46(2), 165–173. <https://doi.org/10.3329/jbas.v46i2.63415>
 - (6) **Anee TI**, Nahar K, Rahman A, Mahmud JA, Bhuiyan TF, Alam MU, Fujita M, Hasanuzzaman M (2019). Oxidative damage and antioxidant defense in *Sesamum indicum* after different waterlogging durations. *Plants*, 8(7), 196. <https://doi.org/10.3390/plants8070196>
 - (7) Alam MU, Fujita M, Nahar K, Rahman A, **Anee TI**, Masud AAC, Amin AKMR, Hasanuzzaman M (2022). Seed priming upregulates antioxidant defense and glyoxalase systems to conferring simulated drought tolerance in wheat seedlings. *Plant Stress*, 6, 100120. <https://doi.org/10.1016/j.stress.2022.100120>
 - (8) Tuhin MZIH, **Anee TI**, Ahmed N, Rahman M, Rahman K, Hasanuzzaman M (2021). Seed germination behaviour, seedling growth, morpho-physiological and yield attributes of rice grown in cadmium-added soil. *Contribuții Botanice*, LVI, 113–127. <https://doi.org/10.24193/Contrib.Bot.56.11>
 - (9) Hasanuzzaman M, Parvin K, Bardhan K, Nahar K, **Anee TI**, Masud AAC, Fotopoulos V (2021). Biostimulants for the Regulation of Reactive Oxygen Species Metabolism in Plants under Abiotic Stress. *Cells*, 10(10), 2537. <https://doi.org/10.3390/cells10102537>
 - (10) Hasanuzzaman M, Bhuyan MHMB, Parvin K, Bhuiyan TF, **Anee TI**, Nahar K, Hossen MS, Zulfikar F, Alam MM, Fujita M (2020). Regulation of ROS metabolism in plants under environmental stress: A review of recent experimental evidence. *International Journal of Molecular Sciences*, 21(22), 8695. <https://doi.org/10.3390/ijms21228695>
 - (11) Hasanuzzaman M, Bhuyan MHMB, **Anee TI**, Parvin K, Nahar K, Mahmud JA, Fujita M (2019). Regulation of ascorbate-glutathione pathway in mitigating oxidative damage in plants under abiotic stress. *Antioxidants*, 8(9), 384. <https://doi.org/10.3390/antiox8090384>
 - (12) Bhuiyan TF, Ahamed KU, Nahar K, Mahmud JA, Bhuyan MHMB, **Anee TI**, Fujita M, Hasanuzzaman M (2019). Mitigation of PEG-induced drought stress in rapeseed (*Brassica rapa* L.) by exogenous application of osmolytes. *Biocatalysis and Agricultural Biotechnology*, 20, 101197. <https://doi.org/10.1016/j.bcab.2019.101197>
 - (13) Hasanuzzaman M, Masud AAC, Bhuiyan TF, **Anee TI** (2019). Legumes for soil fertility management and sustainable agriculture. *SATSA Mukhapatra - Annual Technical Issue*, 23, 29–46.
 - (14) Hasanuzzaman M, Nahar K, Rohman MM, **Anee TI**, Huang Y, Fujita M (2018). Exogenous silicon protects *Brassica napus* plants from salinity-induced oxidative stress through the modulation of AsA-GSH pathway, thiol-dependent antioxidant enzymes and glyoxalase systems. *Gesunde Pflanzen*. 70, 185–194. <https://doi.org/10.1007/s10343-018-0430-3>
 - (15) Hasanuzzaman M, Nahar K, **Anee TI**, Khan MIR, Fujita M (2018). Silicon-mediated regulation of antioxidant defense and glyoxalase systems confers drought stress tolerance in *Brassica napus* L. *South African Journal of Botany*, 115, 50–57. <https://doi.org/10.1016/j.sajb.2017.12.006>

- (16) Hasanuzzaman M, Nahar K, **Anee TI**, Fujita M (2017). Exogenous silicon attenuates cadmium induced oxidative stress in *Brassica napus* L. by modulating AsA-GSH pathway and glyoxalase system. *Frontiers in Plant Science*, 8, 1061. <https://doi.org/10.3389/fpls.2017.01061>
- (17) Hasanuzzaman M, Nahar K, **Anee TI**, Fujita M (2017). Glutathione in plants: Biosynthesis and physiological role in abiotic stress tolerance. *Physiology and Molecular Biology of Plants*, 23(2), 249–268. <https://doi.org/10.1007/s12298-017-0422-2>
- (18) Hasanuzzaman M, Nahar K, Hossain MS, **Anee TI**, Parvin K, Fujita M (2017). Nitric oxide pretreatment enhances antioxidant defense and glyoxalase systems to confer PEG-induced oxidative stress in rapeseed. *Journal of Plant Interactions*, 12(1), 323–331. <https://doi.org/10.1080/17429145.2017.1362052>
- (19) Naim A, Matin A, **Anee TI**, Hasanuzzaman M, Chowdhury IF, Hasanuzzaman M (2017). Exogenous selenium improves growth, water balance and chlorophyll content in indica and japonica rice exposed to salinity. *Transylvanian Review*, XXV(16): 4047–4058.
- (20) Masrufa S, Rahman A, Hasanuzzaman M, Nath SCD, Ali MH, **Anee TI**, Hasanuzzaman M (2016). Effect of pre-planting hardening of seedlings on growth, dry matter accumulation and tillering of inbred and hybrid rice. *Focus on Sciences*, 2(2), 1–10. <https://doi.org/10.20286/focsci-020224>
- (21) Rahman MH, Naim MA, Matin MA, **Anee TI**, Hossain MA, Hasanuzzaman M (2016). Variations of growth parameters in some aromatic rice varieties under salt stress. *Bangladesh Agronomy Journal*, 19(2), 1–10. <https://doi.org/10.3329/baj.v19i2.31847>
- (22) Masrufa S, Rahman A, Hasanuzzaman M, **Anee TI**, Ali MH, Hasanuzzaman M (2016). Pre-planting hardening-induced variability in yield attributes and yield of inbred and hybrid rice. *Bangladesh Agronomy Journal*, 19(1), 87–97. <https://doi.org/10.3329/baj.v19i1.29875>
- Book Chapters:
- (23) Hasanuzzaman M, Parvin K, **Anee TI**, Masud AAC, Nowroz F (2022). Salt stress responses and tolerance in soybean. In: Plant stress physiology - Perspectives in Agriculture, IntechOpen. <https://doi.org/10.5772/intechopen.102835>
- (24) Sathi KS, Masud AAC, **Anee TI**, Rahman K, Ahmed N, Hasanuzzaman M (2022). Soybean plants under waterlogging stress: responses and adaptation mechanisms. In: Hasanuzzaman M. et al. (Eds.) Managing Plant Production Under Changing Environment, Springer Nature Singapore Pte Ltd. https://doi.org/10.1007/978-981-16-5059-8_5
- (25) Hasanuzzaman M, Mohsin SM, Bhuyan MHMB, Bhuiyan TF, **Anee TI**, Masud AAC, Nahar K (2020). Phytotoxicity, environmental and health hazards of herbicides: Challenges and ways forward. In: MNV Prasad (Ed.) Agrochemicals detection, treatment and remediation. Pesticides and chemical fertilizers, Butterworth Heinemann, pp. 55–99. <https://doi.org/10.1016/B978-0-08-103017-2.00025-8>
- (26) Mahmud JA, Bhuyan MHMB, **Anee TI**, Nahar K, Fujita M, Hasanuzzaman M (2019). Reactive oxygen species metabolism and antioxidant defense in plants under metal/metalloid stress. In: M Hasanuzzaman, KR Hakeem, K Nahar, HF Alharby (Eds.), Plant abiotic stress tolerance: Agronomic, molecular and biotechnological approaches, Springer, pp. 221–257. https://doi.org/10.1007/978-3-030-06118-0_10
- (27) Hasanuzzaman M, **Anee TI**, Bhuiyan TF, Nahar K, Fujita M (2019). Emerging role of osmolytes in enhancing abiotic stress tolerance in rice. In: Hasanuzzaman M, Fujita M, Nahar K, Biswas J (Eds), Advances in rice research for abiotic stress tolerance. Woodhead Publishing, pp, 677–708. <https://doi.org/10.1016/B978-0-12-814332-2.00033-2>
- (28) Hasanuzzaman M, Islam MT, Nahar K, **Anee TI** (2017). Drought stress tolerance in wheat: Omics approaches in enhancing antioxidant defense. In: SM Zargar (Ed.), Abiotic stress-

mediated sensing and signaling in plants: An omics perspective, Springer, pp. 267–307. https://doi.org/10.1007/978-981-10-7479-0_10

- (29) Hasanuzzaman M, Nahar K, Bhuiyan TF, **Anee TI**, Inafuku M, Oku H, Fujita M (2017). Salicylic acid: An all-rounder in regulating abiotic stress responses in plants. In: M El-Esawi (Ed.), *Phytohormones - Signaling mechanisms and crosstalk in plant development and stress responses*, IntechOpen, pp. 31–75. <https://doi.org/10.5772/intechopen.68213>
- (30) Hasanuzzaman M, Nahar K, Rahman A, **Anee TI**, Alam MU, Bhuiyan TF, Oku H, Fujita M (2017). Approaches to enhance salt stress tolerance in wheat. In: R Wanyera, J Owuoché (Eds.), *Wheat improvement, management and utilization*, IntechOpen, pp. 151–187. <https://doi.org/10.5772/67247>
- (31) Hasanuzzaman M, Mahmud JA, Nahar K, **Anee TI**, Oku H, Fujita M (2017). Responses, adaptation, and ROS metabolism in plants exposed to waterlogging stress. In: MIR Khan, NA Khan (Eds.), *Reactive oxygen species and antioxidant systems in plants: Role and regulation under abiotic stress*, Springer Nature, pp. 257–281. https://doi.org/10.1007/978-981-10-5254-5_10

Academic awards:

- Dean's Award 2019, Faculty of Agriculture, Sher-e-Bangla Agricultural University
- Best Presentation Award, 3rd International Conference on “Global Initiative in Agricultural, Forestry and Applied Sciences for Food Security, Environmental Safety and Sustainable Development (GIAFAS-2021)”, 17-18 October 2021, Uttarakhand, India
- Best Presenter Award (Student), 16th Conference of Bangladesh Society of Agronomy (BSA) on “Agronomy for Sustainable Development Goal”, 28 October 2017, Dhaka, Bangladesh
- National Science and Technology (NST) Fellowship 2015-2016, Ministry of Science and Technology, Bangladesh

Membership in academic societies:

- Member of Japanese Society of Plant Breeding (JSB)
- Member of American Society of Plant Biologists (ASPB)
- Life member of Bangladesh Society of Agronomy (BSA)
- Life member of Japanese Universities Alumni Association in Bangladesh (JUAAB)
- Member of Sher-e-Bangla Agricultural University Teachers' Association (SAUTA)
- Member of Weed Science Society of Bangladesh (WSSB)
- Member of International Society for Environmental Information Science (ISEIS)
- Member of American Oil Chemist Society (AOCS)
- Member of International Association for Agricultural Sustainability (IAAS)