

তৌফিকা ইসলাম এ্যানি

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EDUCATION

Master of Science in Agronomy: January, 2014 – June, 2016

Department of Agronomy, Sher-e-Bangla Agricultural University, Dhaka-1207, Bangladesh

CGPA: 3.96 in a scale of 4.00 (Merit position: 2nd)

Research Student: March, 2016 – February, 2017

Funded by Japan Student Services Organization (JASSO)

Laboratory of Plant Stress Responses, Faculty of Agriculture, Kagawa University

Ikenobe-2393, Miki-cho, Kita-gun, Kagawa 761-0795, Japan

Bachelors of Science in Agriculture (Honours): December, 2013

Sher-e-Bangla Agricultural University, Dhaka-1207, Bangladesh

CGPA: 3.76 in a scale of 4.00

Higher Secondary School Certificate (Science Group): July, 2009

Ideal School and College, Motijheel, Dhaka-1000, Bangladesh

Board of Intermediate and Secondary Education, Dhaka

GPA: 5.00 in a scale of 5.00

Secondary School Certificate (Science Group): June, 2007

Govt. Model Girl's High School, Brahmanbaria-3400, Bangladesh

Board of Intermediate and Secondary Education, Cumilla

GPA: 5.00 in a scale of 5.00

ACADEMIC ACHIEVEMENTS

- Dean's Award 2019, Sher-e-Bangla Agricultural University
- National Science and Technology (NST) Fellowship 2015-2016, Ministry of Science and Technology, Bangladesh
- H.S.C Scholarship 2009, Intermediate and Secondary Education Boards, Bangladesh
- S.S.C Scholarship 2007, Intermediate and Secondary Education Boards, Bangladesh
- Junior Scholarship 2004, Ministry of Education, Bangladesh
- Primary Scholarship 2001, Ministry of Education, Bangladesh

EXPERIENCES

- Lecturer (December 2018-till date): Department of Agronomy, Sher-e-Bangla Agricultural University, Dhaka-1207.
- 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.
- Research Scholar (March 2016-February 2017): Laboratory of Plant Stress Responses, Department of Applied Biological Science, Kagawa University, Japan. Funded by Japan Student Service 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.

PUBLICATIONS

▪ **Book Chapters:**

1. 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: Khan MIR, Khan NA (eds), Reactive Oxygen Species and Antioxidant Systems in Plants: Role and Regulation under Abiotic Stress, Springer Nature, Singapore. Pp. 257–281. DOI: 10.1007/978-981-10-5254-5_10

2. 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: Wanyera R, Owuoche J (eds) *Wheat Improvement, Management And Utilization*, InTech, Rijeka. Pp. 151–187. DOI: 10.5772/67247
3. 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: El-Esawi M (ed) *Phytohormones - Signaling Mechanisms and Crosstalk in Plant Development and Stress Responses*, InTech. Pp. 31–75. DOI: 10.5772/intechopen.68213
4. Hasanuzzaman M, Islam MT, Nahar K, **Anee TI** (2017) Drought stress tolerance in wheat: Omics approaches in enhancing antioxidant defense. In: Zargar SM (ed) *Abiotic stress-mediated sensing and signaling in plants: An Omics Perspective*. Springer, New York. Pp. 267–307
5. 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. Hasanuzzaman et al. (eds.) *Plant Abiotic Stress Tolerance*. DOI: 10.1007/978-3-030-06118-0_10
6. 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: *Agrochemicals Detection, Treatment and Remediation. Pesticides and Chemical Fertilizers*. Prasad MNV (ed) Butterworth Heinemann, Hyderabad, India. Pp. 55–99. DOI: 10.1016/B978-0-08-103017-2.00025-8

▪ **Review Articles:**

7. 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. DOI: 10.1007/s12298-017-0422-2
8. 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
9. 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* 8:384. DOI: 10.3390/antiox8090384

▪ **Research Articles:**

10. 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 Science* 2(2): 1–11
11. 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
12. 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
13. 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
14. 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*. DOI: 10.3389/fpls.2017.01061
15. 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. DOI: 10.1080/17429145.2017.1362052
16. Hasanuzzaman M, Nahar K, **Anee TI**, Khan MIR, Fujita M (2017) 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. DOI: 10.1016/j.sajb.2017.12.006

17. 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*. DOI: 10.1007/s10343-018-0430-3
18. 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. DOI: 10.1016/j.bcab.2019.101197
19. **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* 8:196. DOI: 10.3390/plants8070196

▪ **Abstracts:**

1. **Anee TI**, Tuhin ZIH, Matin MA, Biswas PK, Hasanuzzaman M (2015) Morphological and physiological responses of sesame to waterlogging at different growth stages. *Souvenir of 14th Conference of Bangladesh Society of Agronomy*. p. 71
2. **Anee TI**, Hasanuzzaman M, Nahar K, Rahman A, Mahmud JA, Hossain MS, Bhuiyan TF, Alam MU, Fujita M (2016) Time-dependent variations in oxidative stress markers, proline and non-enzymatic antioxidants in sesame (*Sesamum indicum* L.) grown under waterlogging condition. *Proceedings of PhytoGene Symposium VIII*. p. 26
3. Bhuiyan TF, Hasanuzzaman M, Mahmud JA, Nahar K, Rahman A, Hossain MS, **Anee TI**, Alam MU, Fujita M (2016) Mitigation of drought stress in rapeseed (*Brassica campestris* L.) by exogenous application of proline, glycine betaine and trehalose. *Proceedings of PhytoGene Symposium VIII*. p. 29

MEMBERSHIPS

- Member of American Oil Chemist Society (AOCS)
- Member of International Society for Environmental Information Science (ISEIS)
- Life member of Japanese Universities Alumni Association in Bangladesh (JUAAB)
- Life member of Bangladesh Society of Agronomy (BSA)
- Member of Krishibid Institution of Bangladesh
- Member of Sher-e-Bangla Agricultural University Teachers' Association

CONFERENCES ATTENDED

- 5th Conference of the **Weed Science Society of Bangladesh (WSSB)** on Integrated Weed Management for Sustainable Agriculture, 16 May, 2015, Dhaka, Bangladesh
- 14th Conference of **Bangladesh Society of Agronomy (BSA)** on Agronomic Challenges for Climate Smart Agriculture, 31 October, 2015, Dhaka, Bangladesh
- PhytoGene Symposium VIII of **Kagawa University Faculty of Agriculture plant genome gene source Analysis Center** on Possibility of Fight: Gene and the Future, 17 October, 2016, Takamatsu, Japan
- 16th Conference of **Bangladesh Society of Agronomy (BSA)** on Agronomy for Sustainable Development Goal, 28 October, 2017, Dhaka, Bangladesh
- 17th Conference of **Bangladesh Society of Agronomy (BSA)** on Agronomy for Food and Nutritional security, 01 December, 2018, Dhaka, Bangladesh

COUNTRY VISITED: India, Japan