

M M Emam Ahmed

Plant Breeding Division, Bangladesh Rice Research Institute,
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Languages

Bangla and English

Academic Qualifications

Master of Science, Genetics and Plant Breeding 2013 - 14
Bangladesh Agricultural University, Mymensingh, Bangladesh
(CGPA 3.75 in the scale of 4.00)

Bachelor of Science, Agriculture 2009 - 12
Bangladesh Agricultural University, Mymensingh, Bangladesh
(CGPA 3.74 in the scale of 4.00)

Present Position

Scientific Officer 2013 - Present
Plant Breeding Division, Bangladesh Rice Research Institute (BRRI), Gazipur

Research Experiences

- Manage one of the largest varietal improvement programs of BRRI titled 'Irrigated rice for favorable and cold environment'. Also, implement speed breeding approach to advance segregating population through shortening breeding cycle in Rapid Generation Advance nursery
- Manage and work closely on developing crossing program, mapping populations and multi-location field trials to evaluate newly developed rice breeding lines
- Have basic expertise and experience on molecular works like PCR and gel documentation to perform marker assisted selection against Bacterial Blight and Blast disease of rice
- Have practical experience on phenotyping root development traits of rice using hydroponic media
- Collaborate with colleagues to execute three research projects titled:
 - 'Transforming Rice Breeding' with International Rice Research Institute (IRRI), Philippines
 - 'Short duration and cold tolerance rice breeding program' with Krishi Gobeshona Foundation (KGF), Bangladesh and IRRI Bangladesh Office and
 - 'Development of Stress tolerant crops' with Japan International Research Center for Agricultural Sciences (JIRCAS), Japan.

Career Related Training/Program Experiences

National

Participated in the training program titled

1. Crossing Design of BRRI's Breeding Program using Genotyping by Sequencing Profiles
2. Programming R for Experimental Design and Data Analysis

Foreign Training/Program

Participated in the training/program titled

1. Rice Breeding: Recent Developments, Emerging Challenges, and Future Needs
IRRI South Asia Hub, Hyderabad, India (September 2014)
2. Hands on Training on RGA System to Shorten the Breeding Cycle
IRRI, Metro Manila, Philippines (October-December 2016)
3. Field Study Tour and Annual Workshop on Upland Rice Network of South and Southeast Asia. Yunnan Province, China (September 2017)
4. Development of rice breeding line for high nitrogen use (01 October 2018 to 30 September 2019). JIRACS, Ibaraki prefecture, Tsukuba, Japan

List of Publications

1. **Ahmed, MM Emam**, M. Ashik Iqbal Khan, Shahjahan Kabir, Yoshimichi Fukuta, and Mitsuhiro Obara. "Genetic variations of root development traits under different concentrations and forms of nitrogen in Bangladeshi rice (*Oryza sativa* L.) accessions." *Soil Science and Plant Nutrition* (2020): 1-10.
2. Mondal, Satyen, Jamil Hasan, Priya Lal Biswas, **Emam Ahmed**, Tuhin Halder, Md Panna Ali, Amina Khatun et al. "Nitrogen Use Efficiency in Rice under Abiotic Stress: Plant Breeding Approach." In *Recent Advances in Rice Research*. *IntechOpen*, 2020.
3. Mondal, Satyen, Najeebul Rehman Sofi, **MM Emam Ahmed**, Tuhin Halder, and Partha S. Biswas. "Regulatory Genes and Enzymatic Complex of Flowering Time in Rice." *Plant Breeding and Biotechnology* 7, no. 3 (2019): 161-174.
4. Khatun, M., **M. M. Emam Ahmed**, M. A. Syed, F. Akter, S. Das, M. E. Haq, and S. S. Dipti. "Identification of Ideal Trial Sites and Wide Adaptable T. Aus Rice Genotypes Suitable for Bangladesh." *Bangladesh Rice Journal* 23, no. 2 (2019): 77-85.
5. Biswas, A., **M. M. Emam Ahmed**, T. Halder, S. Akter, R. Yasmeen, and M. S. Rahman. "Photosensitive Rice (*Oryza sativa* L.) Varieties under Delayed Planting as an Option to Minimize Rice Yield Loss in Flood Affected T. Aman Season." *Bangladesh Rice Journal* 23, no. 1 (2019): 65-72.
6. Shalahuddin, A. K. M., A. S. M. Masuduzzaman, **MM Emam Ahmed**, T. L. Aditya, and M. S. Kabir. "Development of High Yielding Deep Water Rice Variety BRRI dhan91 for Semi Deep Flooded Ecosystem of Bangladesh." *Bangladesh Rice Journal* 23, no. 1 (2019): 57-63.

7. Afrin, Sadia, A. Latif, N. M. A. Banu, M. M. M. Kabir, S. S. Haque, **MM Emam Ahmed**, N. N. Tonu, and M. P. Ali. "Intercropping empower reduces insect pests and increases biodiversity in agro-ecosystem." *Agricultural Sciences* 8, no. 10 (2017): 1120.
8. Haque, Md Maksudul, M. Anisuzzaman, **MM Emam Ahmed**, Partha S. Biswas, and Md Ansar Ali. "Multi-Environment Variety Testing (Pre-Met) for Irrigated Ecosystem in Rice (*Oryza Sativa* L.)." *International Journal of Sustainable Agricultural Research* 4, no. 1 (2017): 9-15.
9. **Emam-Ahmed**, M. M., M. M. Haque, A. H. N. Robin, M. A. Hossain, and M. R. Biswash. "Assessment of Seedling Growth of Deepwater Rice Genotypes under Osmotic Stress Condition." *J Rice Res* 4, no. 173 (2016): 2.
10. Masuduzzaman, A. S. M., H. U. Ahmad, M. Haque, and **M. M. E. Ahmed**. "Evaluation of rice lines tolerant to heat during flowering stage." *Rice Research* (2016): 1-5.
11. Masuduzzaman, A., M. Haque, **M. E. Ahmed**, and C. K. Mohapatra. "SSR marker-based genetic diversity analysis of tidal and flood prone areas in rice (*Oryza sativa* L.)." *Journal of Biotechnology & Biomaterials* 6, no. 3 (2016).
12. **Ahmed**, **MM Emam**, Md Maksudul Haque, ABM Arif Hasan Khan Robin, and Mohammad Anwar Hossain. "Morphological characterization of deepwater rice genotypes." *Agriculture and Food Sciences Research* 3, no. 2 (2016): 59-65.
13. Biswash, Md Romel, Mashuka Sharmin, Md Maksudul Haque, Golam Sarwar Jahan, and **MM Emam Ahmed**. "Applied on Various Inorganic Fertilizers in Soil and to Evaluate the Effect of Nutrient Content and Uptake of T. Aman Rice (BRRI dhan49)." *European Journal of Applied Sciences* 6, no. 3 (2014): 50-56.

Skills and Interests

Molecular: PCR, gel documentation and primer designing for QTL mapping with SSR

Software: MS Office, R programming for linear mixed model analysis and data visualization, Tassel 5.0 for SNP data analysis

Interests: Reading (Poems and Novels)

Sports: Volleyball, Soccer and Cricket

Travel: India, Philippines, China and Japan