Kazi Khayrul Bashar

Senior Research Officer at Bangladesh Forest Research Institute

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Google Scholar
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Web of Science
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Current Position

2022 - Senior Research Officer
Silviculture Genetics Division, Bangladesh Forest Research Institute (BFRI), Chattogram, Bangladesh

Previous Positions

2015 - 2022 Biotechnologist
Bangladesh Jute Research Institute, Dhaka, Bangladesh

2012 - 2014 Master's Fellow
Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur, Bangladesh

Education

2014 **MS (Genetics and Plant Breeding)** **3.91/4.00**
Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur, Bangladesh

2012 **BS (Agriculture)** **3.87/4.00**
Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur, Bangladesh

MS Thesis

2014 Morphological and Molecular Characterization of Some Selected Aromatic Rice Genotypes.

Awards

2012 Poster Presentation (3rd): Golden Rice: A True Weapon Against Malnutrition
Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur, Bangladesh

English Language Proficiency

International English Language Testing System (IELTS): Overall band score 6.5 (October 2024)

Skills

Plant breeding method: Three-line hybrid breeding.

Experimental Techniques: DNA/RNA extraction, PCR, qRT-PCR RNA-Seq, agarose/polyacrylamide gel electrophoresis, plant tissue culture.

Bioinformatic Tools: Local and web BLAST, Blast 2GO, Clustal omega, SMART, Pfam, Prosite, MEME, InterProScan, Agustus, ORF finder, MBCF oligo calculator, Expasy, String, TMHMM etc.

DNA/RNA sequence analysis: BioEdit, Sequencer 5.4.6, MEGA 11.

Statistical analysis: Statistix 10, RStudio 4.4.1.

Training

2024 Conservation and Management of Plant Genetic Resources, Bangladesh Agricultural Research Council (BARC), Dhaka, Bangladesh.

2024 Genome Editing for Agricultural Research, Bangladesh Agricultural Research Council (BARC), Dhaka, Bangladesh.

2023 Forestry Research Methodology, Bangladesh Forest Research Institute (BFRI), Chattogram, Bangladesh.

2023 DNA profiling and DNA barcoding for the management and utilization of forest resources, Forest Research Institute Malaysia (FRIM), Malaysia.

2018 30kb SMRTbell Express Libraries Preparation, Bangladesh Jute Research Institute (BJRI), Dhaka, Bangladesh.

2017 NextSeq 500 & TruSeq Stranded Total RNA training, Bangladesh Jute Research Institute (BJRI), Dhaka, Bangladesh.

2014 Molecular Biology Application in Plant Breeding, Bangladesh Rice Research Institute (BRRI), Gazipur, Bangladesh.

2014 Basic Biotechnology, National Institute of Biotechnology (NIB), Dhaka, Bangladesh.

Workshop

2024 Stakcholder Workshop on Setting National Targets to Contribute to Kunming Montreal Global Biodiversity Framework (KMGBF).

2024 Workshop on Half Yearly Research Progress and Review of Bangladesh Forest Research Institute, Chattogram for the financial year 2023-24.

2024 Progress Review Workshop of Biotechnological Research of NARS Institutions based on Biotechnology Policy-2012.

2024 Risk Assessment of Biosecurity in Bangladesh and the way Forward.

2024 Crop and forestry development in Bangladesh: New ideas and perspectives.

2024 Workshop on finalization of draft study manual prepared under the project entitled “Development of an Improved Agarwood Inoculation Technique”.

2024 Progress Review Workshop of the implementation of the targets related to the Sustainable Development Goals (SDGs) by the Ministry of Agriculture.

2024 Workshop on Implementation of “Sustainable Development Goals (SDGs)”, “8th Five Year Plan” and “Annual Development Program (ADP)”.

2024 Workshop on “Smart Bangladesh Construction”.

2024 Workshop organized by Bangladesh Forest Research Institute, Chattogram to draft “National Bamboo, Cane and Murta Policy-2022”.

2023 Workshop on “Bangladesh National Conservation Strategy 2021-2036”.

2023 Review workshop on “Matured Technology Developed by NARS Institutes (2020-21 to 2022-23)”.

2023 Annual review workshop on “Forestry and Agroforestry Programs of NARS Institutes: Research Progress2022-23 and Research Program 2023-24”.

2023 Knowledge sharing workshop after obtaining PhD degree and foreign training by the officials of Bangladesh Forest Research Institute, Chattogram.

Peer-reviewed Publications

13 research articles, 4 reviews, 1 research communication, 1 under review.

Total citations in Google Scholar: 283 (as of October 2024)

19. Jahirul Islam, Waheeda Parvin, **Kazi Khayrul Bashar**, Saiful Alam Md. Tareq, Md. Jakir Hossain, Md. Mahbubur Rahman. 2024. Micro-propagation and Mass production of Raktan (*Lophopetalum wightianum* Arn.), A Globally Threatened Evergreen Tree Species in Bangladesh. ***Plant Cell, Tissue and Organ Culture***. Submitted (under review).

18. Md Sabbir Hossain, Borhan Ahmed, Rasel Ahmed, Md. Wali Ullah, Shah Md Tamim Kabir, **Kazi Khayrul Bashar**, Emdadul Mannan Emdad. 2024. The Lignin Riddle in Jute: A Comparative Genomic Investigation Identifies Targets for Improving Fiber Quality. ***Gene Reports***. 36: 101972. https://doi.org/10.1016/j.genrep.2024.101972

17. **Kazi Khayrul Bashar**, Md. Zablul Tareq, Shah Md Tamim Kabir, Md. Sabbir Hossain, Rasel Ahmed, Borhan Ahmed, Md. Shahidul Islam. 2023. Comparative transcriptomics discovers the genetic basis of contrasting waterlogging tolerance between two cultivated jute species. ***Industrial Crops and Products***. 199: 116701. https://doi.org/10.1016/j.indcrop.2023.116701

16. Borhan Ahmed, Mobashwer Alam, Nasima Aktar, Md. Sabbir Hossain, Md. Wali Ullah, **Kazi Khayrul Bashar**, Shah Md Tamim Kabir, Emdadul Mannan Emdad, Md. Shahidul Islam. 2022. Genome-wide investigation of aquaporin genes in *Corchorus* spp and their role in organ development and abiotic stress tolerance. ***Plant Gene***. 34: 100410. https://doi.org/10.1016/j.plgene.2023.100410

15. Md Abu Sadat, Md Wali Ullah, Md Sabbir Hossain, Borhan Ahmed, **Kazi Khayrul Bashar**. 2022. Genome-wide in silico identification of phospholipase D (PLD) gene family from *Corchorus capsularis* and *Corchorus olitorius*: reveals their responses to plant stress. ***Journal of Genetic Engineering and Biotechnology***. 20(1): 28. https://doi.org/10.1186/s43141-022-00311-w

14. Md. Zablul Tareq, Md. Abul Fazal Mollah, Md. Saiful Alam Sarker, **Kazi Khayrul Bashar**, Md. Delwar Hossain Sarker, Md. Moniruzzaman, Syed Nazrul Islam, Md. Zahid Al Rafiq, Md. Abu Sadat. 2021. Nutritive Value of BJRI Mesta-2 (*Hibiscus sabdarifa L.*) Leaves. ***Acta Agrobotanica***. 74: 749. https://doi.org/10.5586/aa.749

13. Shah Md Tamim Kabir, Md. Sabbir Hossain, **Kazi Khayrul Bashar**, Ummay Honi, Borhan Ahmed, Emdadul Mannan Emdad, Md. Monjurul Alam, Md. Samiul Haque, Md. Shahidul Islam. 2021. Genome-wide identification and expression profiling of *AP2/ERF* superfamily genes under stress conditions in dark jute (*Corchorus olitorius* L.). ***Industrial Crops & Products***. 166: 113469. https://doi.org/10.1016/j.indcrop.2021.113469

12. Md. Abu Sadat, Md. Wali Ullah, **Kazi Khayrul Bashar**, Quazi Md. Mosaddeque Hossen, Md. Zablul Tareq, Md. Shahidul Islam. 2021. Genome-wide identification of F-box proteins in *Macrophomina phaseolina* and comparison with other fungus. ***Journal of Genetic Engineering and Biotechnology***. 19: 46. https://doi.org/10.1186/s43141-021-00143-0

11. **Kazi Khayrul Bashar**, Md. Abu Hanif. 2021. Crop gene editing against biotic stresses via CRISPR/Cas9 tools: a review. ***Archives of Phytopathology and Plant Protection***. 54(15-16): 1159-1181. https://doi.org/10.1080/03235408.2021.1895476

10. Ummay Honi, Md. Ruhul Amin, Shah Md Tamim Kabir, **Kazi Khayrul Bashar**, Md. Moniruzzaman, Rownak Jahan, Sharmin Jahan, Md. Samiul Haque and Shahidul Islam. 2020. Genome-wide identification, characterization and expression profiling of gibberellin metabolism genes in jute. ***BMC Plant Biology***. 20: 306. https://doi.org/10.1186/s12870-020-02512-2

09. Md. Abul Fazal Mollah, Md. Zablul Tareq, **Kazi Khayrul Bashar**, ABM Zahidul Hoque, Md. Meftahul Karim and Md. Zahid Al Rafiq. 2020. Antioxidant properties of BJRI vegetable mesta-1 (*Hibiscus sabdariffa* L.). ***Plant Science Today***. 7(2): 154. https://doi.org/10.14719/pst.2020.7.2.664

08. **Kazi Khayrul Bashar**, Md. Zablul Tareq and Md. Shahidul Islam. 2020. Unlocking the mystery of plants' survival capability under waterlogging stress. ***Plant Science Today***. 7(2): 142-153. https://doi.org/10.14719/pst.2020.7.2.663

07. Md. Tahjib-Ul-Arif, Abdullah Al Mamun Sohag, Sonya Afrin, **Kazi Khayrul Bashar**, Tania Afrin, AGM Sofi Uddin Mahamud, Mohammed Arif Sadik Polash, Md. Tahmeed Hossain, Md. Abu Taher Sohel, Marian Brestic and Yoshiyuki Murata. 2019. Differential Response of Sugar Beet to Long- Term Mild to Severe Salinity in a Soil-Pot Culture. ***Agriculture***. 9(10): 22. https://doi.org/10.3390/agriculture9100223

06. Md. Mahmudul Hasan Arif Sardar, Habibur Rahman, Md. Shahidul Islam, Mohammad Saiful Alam Sarker and **Kazi Khayrul Bashar**. 2019. Comparative resistance and yield performance of summer mungbean mutants and varieties as affected by MYMV. ***Plant Science Today***. 6(4): 433. https://doi.org/10.14719/pst.2019.6.4.596

05. Md. Zablul Tareq, **Kazi Khayrul Bashar**, Md. Ruhul Amin, Muhammad Delwar Hossain Sarker, Md. Moniruzzaman, Mohammad Saiful Alam Sarker, and Md. Shahidul Islam. 2019. Nutritional composition of some jute genotypes as vegetables. ***International Journal of Vegetable Science***. 26(5): 506-515. https://doi.org/10.1080/19315260.2019.1658686

04. **Kazi Khayrul Bashar**, Md. Zablul Tareq, Md. Ruhul Amin, Ummay Honi ,Md. Tahjib-Ul-Arif, Md. Abu Sadat and Quazi Md. Mosaddeque Hossen. 2019. Phytohormone-Mediated Stomatal Response, Escape and Quiescence Strategies in Plants under Flooding Stress. ***Agronomy*** 9(2): 43. https://doi.org/10.3390/agronomy9020043

03. **Kazi Khayrul Bashar**. 2018. Hormone dependent survival mechanisms of plants during post-waterlogging stress. ***Plant signaling & behavior***. 13(10): 1-5. https://doi.org/10.1080/15592324.2018.1529522

02. **Kazi Khayrul Bashar**, Nasrin Akter Ivy, MA Khaleque Mian, Khandakar Md. Iftekharuddaula, and Md. Azizul Hoque. 2017. Assessment of genetic diversity among selected aromatic rice genotypes using SSR markers. ***International Journal of Biosciences***. 11(3): 184-198. http://dx.doi.org/10.12692/ijb/11.3.184-198

01. **Kazi Khayrul Bashar**, Nasrin Akter Ivy, MA Khaleque Mian, Khandakar Md. Iftekharuddaula, and Md. Azizul Hoque. 2016. Morphological characterization and diversity analysis of some selected aromatic rice genotypes in Bangladesh. *Journal of Biodiversity and Environmental Sciences*. 8(4): 196-208.

Peer reviewer

122 peer review records of 99 manuscripts (as of October 2024)

Journal of genetic engineering and biotechnology	Scientific reports	Archives of agronomy and soil science
Annals of the New York Academy of Sciences	BMC genomics	Journal of Advanced Research
Archives of phytopathology and plant protection	BMC plant biology	Acta physiologiae plantarum
International journal of biological macromolecules	Gene	Frontiers in plant science
Genetic resources and crop evolution	Plant gene	Plant signaling & behavior
Current journal of applied science and technology	Plant Stress	Horticulture research
South African journal of botany	Tropical plant biology	Journal of plant research
Journal of soil science and plant nutrition	Plant science today	Frontiers in bioscience- -Landmark
Chemical and Biological Technologies in Agriculture		Theoretical and applied genetics
Phyton - International Journal of Experimental Botany		

Society Memberships

Bangladesh Association for the Advancement of Science (**BAAS**)
Plant Breeding and Genetics Society of Bangladesh (**PBGSB**)
Bangladesh Association for Plant Tissue Culture and Biotechnology (**BAPTC&B**)
Bangladesh Nano Society
Krishibid Institution (**KIB**)

BFRI Memberships

Member Secretary" and Focal Point: Plant Genetic Resource Conservation
Member: Sustainable Development Goals (SDG)
Member: Research progress evaluation committee of the project entitled "Development of an Improved Agarwood Inoculation Technique"
Member: "Technical Committee" formed by Bangladesh Forest Research Institute to provide forestation plan and related support for the allotted area for construction of permanent campus of Bangabandhu Sheikh Mujibur Rahman Maritime University, Chattogram, Bangladesh.
Member: "Supply and Monitoring Committee" for the participation of Bangladesh Forest Research Institute in the National Plantation Campaign and Tree Fair 2024 Dhaka.

References

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