



Dr. AFIA SULTANA

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EDUCATION

- PhD in Plant Pathology, Bangladesh Agricultural University, Mymensingh.
- MS in Plant Pathology, Bangladesh Agricultural University, Mymensingh.
- BSc. in Agriculture, Bangladesh Agricultural University, Mymensingh.

RESEARCH PROJECT CONDUCTED

- Isolation and Identification of bacterial strains with antifungal activity against phytopathogenic fungi.
- Effects of KMnO₄, Chitosan and Modified Atmosphere Packaging (MAP) on shelf life and quality of Guava, papaya, mango, banana, red amaranth, potato and carrot.
- Macro and micronutrient analysis of Guava, papaya, mango, banana, red amaranth, potato and carrot.
- Estimation of overall food losses and waste in all levels of the food chain of household wastage, mango, banana, red amaranth, potato, carrot, and potato.
- Morpho-molecular diversity and pathogenicity of seed borne *Bipolaris sorokiniana* in wheat in Bangladesh.
- Aggressiveness of seedborne *Bipolaris sorokiniana* during seed to plant transmission in wheat.

PROFESSIONAL SKILL

- Detection of seed borne phytopathogenic bacteria and fungi, isolation, and pathogenicity test.
- DNA extraction, confirmation, quantification, PCR, molecular marker-based RAPD, SSR analysis and other molecular techniques including pathology regarding Phytopathogen (bacteria and fungi).
- Skilled in windows operating system along with its necessary programs including MS office, R-Studio and SPSS software.

TRAINING PROGRAMME ATTENDED

- **Capacity Building Training on Climate Change Gender Action Plan Implementation** (17-18 December 2025), Proshika HRDC, Koitta, Manikganj.
- **Special Foundation Training for Non-Cadre Officers** (13 July-10 September 2025), NAPD, Dhaka.
- **Exploratory Data Analysis in Forestry Research with R-Software** (12-17 April 2025, BFRI, Chattogram).
- **Advanced Statistical Methods and Data Analysis in Agricultural Research** (December 29-31, 2024; BARC, Dhaka).

**TRAINING
PROGRAMME
ATTENDED**

- **Online Report Management System** (May 16, 2024; BCC, Dhaka).
- **Use of PPS software for Project Development and Implementation** (January 28-30, 2024; Planning Commission, Dhaka).
- **D-Nothi Management and Implementation** (January 22-23, 2024; BCC, Dhaka).
- **Annual Confidential Report** (January 5, 2024; BFRI, Chattogram).
- **Forestry Research Methodology** (December 10-14, 2023; BFRI, Chattogram).
- **D-Nothi Management** (June 08, 2023; BFRI, Chattogram).
- **Excel based Data management** (March 18-22, 2023; BARC, Dhaka).
- **Office Digitization** (March 13, 2023; BFRI, Chattogram).
- **Finance, Audit and iBUS system software management** (February 20, 2023; BFRI, Chattogram).
- **Project Development and Management** (December 04-08, 2022; BARC, Dhaka).
- **Integration of Gender Concerns and Equity in Climate Change Projects**, (November 27-28, 2022; BCCT, Dhaka).
- **e-Nothi Management** (October 28, 2022; BFRI, Chattogram).
- **National Integrity Strategy** (September 25, 2022; BFRI, Chattogram).
- **Forestry research and development in Bangladesh** (June 15-July 02, 2022; BFRI, Chattogram).
- **Estimation of overall food losses and waste in all levels of the food chain** (September 15, 2020; BAU, Mymensingh).
- **Plant Disease Management** (December 23, 2015; BAU, Mymensingh).
- **Seed health and quality control** (September 25, 2013; BAU, Mymensingh).
- **Detection of seed borne diseases affecting seed quality** (September 24, 2013; Seed Pathology Center, Mymensingh).
- **Incorporation of seed health standards and field health standards in Phyto sanitary certifications** (September 27, 2012; Seed Pathology Center, Mymensingh).
- **Fixation methods of seed standards for germination, moisture content, purity, and health** (September 26, 2012; Seed Pathology Center, Mymensingh).
- **Seed health testing methods for detection of seed borne pathogens (fungi, bacteria, nematodes)** (May 23, 2012; Seed Pathology Center, Mymensingh).

**WORKSHOP
PROGRAMME
ATTENEDED**

- **Effect of Mulches on decreasing soil salinity and Preservation of soil moisture** held on 30 April 2025; Chattogram University.
- **Potential Natural Resources of Bangladesh** held on April 24, 2025; RPATC, Chattogram.
- **Women and Child Rights** held on September 19, 2024; RPATC, Chattogram.
- **Election Manifesto-2024** held on May 07, 2024; RPATC, Chattogram.
- **National Conservation Strategy** held on 17 January 2024; BFRI, Chattogram.
- **Perspective Plan 2021-2041** held on December 21, 2022; RPATC, Chattogram.
- **Benefit of scientific and technological library, information and documentation services in Bangladesh** held on October 30, 2022; BFRI, Chattogram.
- **Human Resource Development (HRD): Plan for NARS Institutes 2041**, held on October 24, 2022; BFRI, Chattogram.

ACCOMPLISHMENT

- Conveneyer of Souvenir “**Onuranan**” published by 32nd SFTC publication committee, Nilkhet, Dhaka.
- Member Secretary of **Gender Budget Committee 2024**.
- Member Secretary of **BFRI ACT 2024**.
- Committee member of **Innovation committee (2022-23)**: Bangladesh Forest Research Institute, Chattogram.
- Member of **Krishibid Institution Bangladesh (KIB)**.
- Life member of **Bangladesh Society for Conservation of Environment and Natural Resources**.
- Member of organizing committee: **1st National Seed Health Fair-2013**.
- Member of the editorial Board: **Seed pathological Progress followed by 1st National Seed health Fair-2013**.
- Reviewer: **International Journal of Pathogen Research**.

AWARDS

- Honorable Director General Award (3rd Position) **Special Foundation Training for Non-Cadre Officers** (13 July-10 September 2025), NAPD, Dhaka.
- **National Science & Technology Fellowship** from Ministry of National Science and Technology, Peoples Republic of Bangladesh, for PhD funding.

RESEARCH PUBLICATIONS

1. **A. Sultana**, A.Q.M. Rashid, M. Harun-or-Rashid, and P. Dey, 2022. Morpho-molecular Diversity of Seed Borne *Bipolaris sorokiniana* in wheat in Bangladesh. *Bangladesh Journal of Plant Pathology*, 38 (1&2):27-36.
2. Hasan, M. K., M.A. Awal, M.R. Amin, M.S. Reza, M.A. Islam, M.Z. Rahman, and **A. Sultana**, 2021. Estimation of overall food losses and waste at all levels of the food chain. Final project report (Implemented by FAO and FPMU of Ministry of Food with financial support from USAID and EU), Department of Horticulture, Bangladesh Agricultural University, Mymensingh.
3. Z.M. Salehuddin, F. H. Tumpa, **A. Sultana**, S. Chakraborty and M. A. R. Khokan, 2020. Evaluation of pathogenic variability of *Bipolaris sorokiniana* different growth stages causing leaf blight of wheat. *IAR Journal of Agriculture Research and Life Science*, 1 (6) 180-185.
4. U.S. Monira, M.A. Ali, **A. Sultana** and R. Islam, 2019. Longevity of *Bipolaris oryzae* on HEERA-2 Hybrid Rice Seed. *Journal of Environmental Science and Natural Resources*, 12 (1&2):209-213.
5. Sultana, M. M. Islam, **A. Sultana** and M.S.R. Khanam, 2019. Screening of rice genotypes for submergence stress at seedling stage. *Journal of Agroforestry and Environment*, 13 (1 & 2): 13-16.
6. M.J. Alam, K.S. Ahmed, **A. Sultana**, S.M. Firoj and I. M. Hasan, 2018: Ensure Food Security of Bangladesh: Analysis of Post-harvest Losses of Maize and Its Pest Management in Stored Condition. *Journal of Agricultural Engineering and Food Technology*, 5 (1): 26-32.
7. M.A.F. Mollah, M.H.K. Rubel, I. M. Hasan, **A. Sultana** and M. Z. Tareq, 2017: Seed Yield and Quality of Late Season Jute (*Corchorus olitorius* L.) Seed as Affected by Plant Growth Regulators. *The Agriculturists*, 15 (2): 115-121.
8. Imam Mehedi, **A. Sultana** & MAU Raju, 2016: Control of seed borne fungi on tomato seeds and their management by botanical extracts. *Research in Agriculture, Livestock and Fisheries*, 3 (3): 403-410.
9. M. H. M. Mubassir, K. M. Nasiruddin, N. H. Shahin, S. N. Begum, **A. Sultana**, & A. Q. M Bazlur Rashid, 2016: Measurement of phenotypic variation for control and bacterial leaf blight inoculated rice lines and varieties. *American Journal of Bioscience and Bioengineering*, 4(6):59-64.
10. A.Q.M Bazlur Rashid, M. B. Meah & **A. Sultana**, 2015: Seed borne fungal diseases of fruits in Mymensingh district. *Bangladesh Journal of Environmental Science and Natural Resources*, 8(1):153-156.
11. **A. Sultana**, M. H. M. Mubassir & A. Q. M Bazlur Rashid, 2014: Seed health status of rice produced by private organizations in Bangladesh. *International Journal of Bio Research*, 16(1):1-6.
12. F. Hossain, A. Q. M. Bazlur Rashid, M. G. Mortuza & **A. Sultana**, 2013: Planting value and proximate composition of

RESEARCH PUBLICATIONS

- wheat as affected by seed borne *B. sorokiniana*. *International Journal of Bio Research*, 15(3):19-23.
13. A.Q.M. B. Rashid, P. Dey & **A. Sultana**, 2012: Progress and prospect of training on the health and quality of seeds in Bangladesh. *Bangladesh Journal of Environmental Science and Natural Resources*, 5(2):307-313.
 14. M. Debnath, **A. Sultana** & A. Q. M. B. Rashid, 2012: Effect of BAU-Biofungicide and plant extracts on seedling vigour of maize. *Bangladesh Journal of Environmental Science and Natural Resources*, 5(2):59-61.
 15. **A.Sultana** & A.Q.M. Bazlur Rashid, 2012: Impact of Seed Transmission of *Bipolaris sorokiniana* on the Planting Value of Wheat Seeds. *Journal of Environmental Science and Natural Resources*, 5(1): 75-78.
 16. **A.Sultana** & A. Q. M. Bazlur Rashid, 2012: Effect of Seed Category as Affected by *Bipolaris sorokiniana* on the Germination of Wheat Seeds. *Journal of Environmental Science and Natural Resources*, 5(1): 113-116.
 17. M. Debnath, **A. Sultana** & A. Q. M. Bazlur Rashid, 2012: Effect of Seed-borne Fungi on the Germinating Seeds and Their Biocontrol in Maize. *Journal of Environmental Science and Natural Resources*, 5(1): 117-120.