

# Curriculum Vitae of Dr. AFIA SULTANA



## **Dr. AFIA SULTANA**

Senior Research Officer  
Development Planning and Project Implementation Section  
Administration Division

### **Contact**

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## **EDUCATION**

- 2018      Doctor of Philosophy (Plant Pathology), Bangladesh Agricultural University, Mymensingh.  
(Thesis: Morpho-molecular diversity and pathogenicity of seed-borne *Bipolaris sorokiniana* in wheat in Bangladesh)
- 2012      Master of Science (Plant Pathology), Bangladesh Agricultural University, Mymensingh.  
(Thesis: Aggressiveness of seed borne *Bipolaris sorokiniana* during seed to plant transmission in wheat.)
- 2010      Bachelor of Science in Agriculture (BSc.Ag.Hon's), Bangladesh Agricultural University, Mymensingh.

## RESEARCH PROJECT CONDUCTED

- Isolation and Identification of bacterial strains with antifungal activity against phytopathogenic fungi.
- Effects of KMnO<sub>4</sub>, 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 seed borne *Bipolaris sorokiniana* during seed to plant transmission in wheat

## PROFESSIONAL SKILLNESS

- 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 in regard to Phytopathogen (bacteria and fungi).
- Skilled in windows operating system along with its necessary programs including MS office, MSTAT-C and SPSS software

## TRAINING PROGRAMME ATTENDED

- Training on “**Project Development and Management**” (04-08 December,2022). Venue: Planning and Evaluation Division, Bangladesh Agricultural Research Council, Farmgate, Dhaka.
- Capacity Building Training on “**Integration of Gender Concerns and Equity in Climate Change Projects**”, organized by Bangladesh Climate Change Trust, Bangladesh Center for Advance Studies, Center for Climate Change and Environmental Research (C3ER) and United Nation Women (November 27-28, 2022). Venue: Bangladesh Climate Change Trust, Mohakhali, Dhaka.
- Training on **e-Nothi Management** (October 28, 2022). Venue: Bangladesh Forest Research Institute, Chattogram
- Training on **National Integrity Strategy** (September 25, 2022). Venue: Bangladesh Forest Research Institute, Chattogram
- Training on **Forestry research and development in Bangladesh** (June 15 to July 02, 2022). Venue: Bangladesh Forest Research Institute, Chattogram
- Training on **Estimation of overall food losses and waste in all levels of the food chain** (September 15, 2020). Venue: Bangladesh Agricultural University, Mymensingh
- Training on **Plant Disease Management** (December 23, 2015). Venue: Bangladesh Agricultural University, Mymensingh
- Training on **Seed health and quality control** (September 25, 2013). Venue: Seed Pathology Center, Mymensingh.

- Training on **Detection of seed borne diseases affecting seed quality** (September 24, 2013). Venue: Seed Pathology Center, Mymensingh.
- Training on **Incorporation of seed health standards and field health standards in Phyto sanitary certifications** (September 27, 2012). Venue: Seed Pathology Center, Mymensingh.
- Training on **Fixation methods of seed standards for germination, moisture content, purity, and health** (September 26, 2012). Venue: Seed Pathology Center, Mymensingh.
- Training on **Seed health testing methods for detection of seed borne pathogens (fungi, bacteria, nematodes, and virus)** (May 23, 2012). Venue: Seed Pathology Center, Mymensingh.

### **WORKSHOP PROGRAMME ATTENDED**

- Workshop on **Perspective Plan 2021-2041** held on December 21, 2022 Regional Public Training Center, Chattogram.
- Workshop on **Benefit of scientific and technological library, information and documentation services in Bangladesh** held on October 30, 2022 at Bangladesh Forest Research Institute, Chattogram.
- Workshop on **Human Resource Development (HRD): Plan for NARS Institutes 2041**, held on October 24, 2022 at Bangladesh Forest Research Institute, Chattogram.

### **OTHER PROFESSIONAL SKILLNESS**

- Member Secretary of **“BFRI ACT 2022”**
- Team 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: **1<sup>st</sup> National Seed Health Fair-2013**
- Reviewer: **International Journal of Pathogen Research**.
- Member of the editorial Board: **Seed pathological Progress followed by 1<sup>st</sup> National Seed health Fair-2013**

## PARTICULAR PUBLICATIONS OF Dr. AFIA SULTANA

1. 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.
2. A. 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.
3. U.S. Monira, M.A. Ali, **A. Sultana** and R. Islam. Longevity of *Bipolaris oryzae* on HEERA-2 Hybrid Rice Seed 2019. *Journal of Environmental Science and Natural Resources*, 12 (1&2):209-213.
4. A. 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.
5. **Afia Sultana** 2018: Morpho-molecular diversity and pathogenicity of seed borne *Bipolaris sorokiniana* in wheat in Bangladesh. PhD Thesis, Bangladesh Agricultural University, Mymensingh.
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 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.