

SIKA MUSTAKI (She/Her)
Lecturer, Horticulture
Institute of Seed Technology,
Sher-e-Bangla Agricultural University,
Dhaka, Bangladesh



+88-017-28856793



mustaki@sau.edu.bd



linkedin.com/sikamustaki



researchgate.net/Sika-Mustaki

SUMMARY

- An Enthusiastic and aspiring agricultural professional with a strong passion for sustainable agriculture, aiming to leverage academic knowledge and practical experience to contribute meaningfully to the field.
- Currently serving as a lecturer in the Institute of Seed Technology at Sher-e-Bangla Agricultural University, Dhaka, Bangladesh.
- Actively engaged in two research projects- one focusing on protected cultivation of fruits and vegetables, and the other on enhancing the quality of date palm sap and jaggery preparation.
- Awardee of the prestigious **Dean's Award** and **National Science and Technology Fellowship**.

WORK EXPERIENCE

Lecturer

09 February 2026- Present

Horticulture, Institute of Seed Technology

Sher-e-Bangla Agricultural University, Dhaka, Bangladesh

(University website: <https://sau.edu.bd/teacher/460>)

Lecturer

25 August 2023- 08 February 2026

Faculty of Agriculture

City University, Dhaka, Bangladesh

Undergraduate courses: (Theory and Sessional)

- HRT 207, 208 – Principles of Horticulture and Landscaping
- HRT 321, 322 – Olericulture
- HRT 407, 408 – Pomology

Research Assistant

November 2019-December 2022

Department of Horticulture, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh

Research Project: Development of Protective Culture Technology for Safe and Quality Vegetables and Fruits Production (Project ID-152, PBRG NATP, BARC)

- Conducted research and was involved with two projects
- Prepared monthly reports, project proposals, and presentations
- Expertized in handling lab equipment, machinery, and chemicals to run specific research
- Received directions from the supervisor and carried out tasks, such as planning experiments, designing, sowing methods, and harvesting methods to ensure quality products

EDUCATION

Master of Science

Degree Granted: January 2023

Department of Horticulture

Sher-e-Bangla Agricultural University, Dhaka, Bangladesh

CGPA: **4.00 out of 4.00** (Merit Position: **1st** among 40 students)

Bachelor of Science

Degree granted: September 2019

Faculty of Agriculture

Sher-e-Bangla Agricultural University, Dhaka, Bangladesh

CGPA: **3.91 out of 4.00** (Merit Position: **5th** among 269 students)

HONORS AND AWARDS

National Science and Technology Fellowship

2020-2021

Awarded by the Ministry of Science and Technology, Bangladesh, for research works; secured 5th position among all Agricultural University students

Dean's Award

2019 and 2023

Received two times for academic excellence in Level 2, 3 and Level 4 of Bachelor of Science in Agriculture (Hons.)
Awarded by Sher-e-Bangla Agricultural University, Dhaka, Bangladesh

Government Scholarship

Awarded by the Government of Bangladesh for academic excellence during Junior, Primary, Secondary, and Higher Secondary level

RESEARCH INTERESTS

- Stress Physiology
- Plant Molecular Biology
- Environmental Stress Physiology
- Plant Physiology
- Post-harvest Physiology
- Post-harvest Technology
- Plant Nutrition

RESEARCH EXPERIENCE

(Graduate Thesis)

March 2020-April 2021

Effect Of Planting Materials And Sources Of Nutrients On Growth, Yield And Quality Of Banana

Supervisor: *Dr. Md. Nazrul Islam, Professor, Department of Horticulture, Sher-e-Bangla Agricultural University*

- Determined the performance of planting materials and organic and inorganic sources of nutrients on the growth, yield, and quality of bananas
- Two planting materials-Tissue culture plantlet and Corm were used, and organic and inorganic fertilizers were applied
- Corm performed best as planting material and vermicompost offered excellent organic sources of nutrients for yield and quality

PROJECTS

1. Development Of Protective Culture Technology for Safe And Quality Vegetable And Fruit Production

Experiments under the project:

i. Manipulation Of Sex Expression By Plant Growth Regulators And Quality Enhancement By Potassium In Muskmelon

- ✓ Investigated the effect of maleic hydrazide on the formation of female flowers
- ✓ Determined the impact of applying glycine-complexed potassium during fruit development and maturation to mitigate potassium deficiency, thereby improving quality

ii. Effect Of Growing Conditions And Maturity Stages At Harvest On Postharvest Quality Of Papaya

- ✓ Investigated the influence of growing conditions and maturity stages at harvest on the ripening physiology and quality of Red Lady Papaya

iii. Evaluation Of The Different Low-Tech Protective Cultivation Approaches To Improve Yield And Phytochemical Accumulation Of Papaya (*Carica Papaya* L.) In Bangladesh

- ✓ Developed a protective method for papaya cultivation to reduce environmental factors' impact and ensure a high-quality yield
- ✓ Production system involved three different treatments: net house, poly shed house, and UV poly shed house, along with an open field condition serving as the control group

2. Safe And Low-Cost Jaggery Production From Date Palm Juice In Bangladesh

Experiments under the project:

i. Effect of different packaging materials and storage conditions on shelf-life and the quality of jaggery

- ✓ Evaluated the quality characteristics of jaggery for 180 days with different treatments of active packaging and storage conditions

ii. Evaluation Of Date Palm Sap Quality By Using Different Protectors

- ✓ Assessed protectors to prevent contamination of juice from pollen, dirt, insects, and bat
- ✓ Measured the quality of juice

iii. Comparative Analysis On Post-Harvest Preservation Of Date Palm Juice

- ✓ Empirical study of juice preservation to prevent fermentation and shelf-life extension.

3. Effect Of Essential Oil As Vitamin C Preservative And Chia Seed As Fortification Of Pineapple Jam

- ✓ Fortified pineapple jam with chia seeds and evaluated its sensory characteristics and nutritional benefits
- ✓ Determined the performance of essential oils for preserving vitamin C and increasing the flavor of jam.

LIST OF PUBLICATIONS

1. Kayes, A., Araf, T., Mustaki, S., Islam, N. and Choudhury, S. 2024. Effects of biochar and chitosan on morpho-physiological, biochemical and yield traits of water-stressed tomato plants. *Int.j.hortic.agric.food sci.* 8(2): 01-09.
DOI: <https://dx.doi.org/10.22161/ijhaf.8.2>
2. Mustaki, S., Islam, N. and Choudhury, S. 2024. Effect of Planting Materials and Sources of Nutrients on Growth, Yield and Quality of Banana. *Acta Scientific Agriculture.* 8(6): 43-51.
DOI: [10.31080/ASAG.2024.08.1380](https://doi.org/10.31080/ASAG.2024.08.1380)
3. Islam, N., Mustaki, S., Hoq, A.N. and Choudhury, N. 2024. Nutritional and biochemical attributes of present juice and Gur produced from date palm trees. *Int J Hortic Food Sci.* 6(1):101-107.
DOI: <https://doi.org/10.33545/26631067.2024.v6.i1b.194>
4. Sadia, A., Islam, N., Mustaki, S., Araf, T. and Choudhury, S. 2024. Impact of Micronutrients and Plant Growth Regulators on Brinjal (*Solanum Melongena* L.) Growth, Yield and Quality. *Asian J. Soil Sci. Plant Nutri.* 10(2): 72-79.
DOI: [10.9734/ajsspn/2024/v10i2262](https://doi.org/10.9734/ajsspn/2024/v10i2262)
5. Choudhury, S., Islam, N., Mustaki, S., Uddain, J., Azad, M.O.K., Choi, K.Y. and Naznin, M.T. 2022 Evaluation of the different Low-Tech Protective Cultivation Approaches to Improve Yield and Phytochemical Accumulation of Papaya (*Carica papaya* L.) in Bangladesh. *Horticulturae.* 8.210.
DOI: <https://doi.org/10.3390/horticulturae8030210>
6. Jarin, T., Islam, N., Choudhury, S., Islam, R., Raen, R., Islam, R. and Mustaki, S. 2024. Effect of essential oils as vitamin C preservatives and chia seed (*Salvia hispanica*) in the fortification of pineapple jam. *Heliyon.* 10(23).
DOI: <https://doi.org/10.1016/j.heliyon.2024.e40711>

TECHNICAL SKILLS

Operation of Laboratory Equipment

- UV-Vis Spectrophotometer
- Polarimeter
- pH-meter
- Chlorophyll SPAD meter
- Muffle Furnace
- Flame Photometer
- Autoclave
- Laminar Air Flow Cabinet
- Refractometer

Data Analysis Software

- IBM SPSS Statistics

Chemical Analysis

- Protein
- Total Sugar
- Reducing Sugar
- Ascorbic Acid
- Ash
- pH
- Statistix 10
- Microbial Count
- Titratable Acidity
- Phenol
- Chlorophyll

FIELD VISIT

- Visited Bangladesh Rice Research Institute (BRRI) to inspect rice fields and related research
- Acquainted with six crop-based research centers (tuber crop, wheat, horticultural, pulse, oil crops, and spice research center) through Bangladesh Agricultural Research Institute (BARI)
- Visited National Agricultural Training Academy (NATA) to identify and gather knowledge on insects- both harmful and beneficial for the crops
- Extension field visit to Manikganj, face-to-face conversation with farmers, identified their problems (collection of data through questionnaire)
- Visited 3 districts (Jessore, Ishwardi and Khulna) of Bangladesh for project purpose to know the present practices of date palm juice extraction and jaggery production

NON-ACADEMIC INTERESTS

Traveling, Farming, Music, Drawing, International Relations