Sheikh Muhammad Masum

PhD in Science of Bioresource Production, MS in Agronomy, PGCST

P: Professor A: Department of Agronomy, Sher-e-Bangla Agricultural University, Bangladesh

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Online Profiles: Google Scholar ‖ LinkedIn ‖ ORCID ‖ ResearchGate

AGRICULTURAL RESEARCHER

VALUED OFFERED

- Deep passion for research and excellence in teaching Plant Science, supported by over 17 years of proven success at Sher-e-Bangla Agricultural University, one of the oldest and most respected agricultural institutions in South Asia.
- Specialized expertise in various research areas, including weed biology, herbicide resistance, allelopathy, AWD irrigation, climate-smart farming systems, plant phenology, and perennial rice management for food security. Moreover, focus on industrial crops, post-harvest technology, weed mapping, and integrated weed management, using strategies to enhance crop performance. Additionally, skilled in advanced analytical tools like R, Python, GIS, remote sensing, DSSAT, and MaxEnt for data mining, predictive modeling, and addressing complex agricultural challenges.
- Comprehensive experience in all aspects of research, encompassing planning, execution, reporting (via journal publications and conference presentations), grant writing, participation in academic and professional meetings, and active collaboration with industry partners.
- Strong professional and personal competencies that complement technical expertise, including strategic and big-picture thinking, exceptional interpersonal and communication skills, effective relationship management, advanced time management, and a diligent, positive, and professional approach to all tasks.

AREAS OF EXPERTISE

- Plant-nutrient interaction
- Molecular analysis of plant
- Weed biology and ecology
- Herbicide resistance and weed population mapping
- Plant plasticity and adaptability in changing climate
- Plant interference mechanism and role of exuded root metabolites
- Plant-soil interaction
- Evaluation of the IWM. approach for sustainable agriculture
- Statistical exploration for plant dynamics, plasticity, and fitness
- Application of Multivariate, LDA, and PCA. tactics in plant science research
- Modeling includes tolerant of invasive species and their richness
- GIS and Remote Sensing

- Planning, preparation for, and conducting of high-quality applied research, including Strategization, Design, Documentation or Production, and Ongoing Evaluation.
- Associated duties such as student consultations, Postgraduate student supervision.

QUALIFICATIONS & CERTIFICATIONS

Doctor of Philosophy (Ph.D.) in Science of Bioresource Production ‖ United Graduate School of Agriculture Sciences, Kagoshima University, Japan — 2018

Thesis Title: Allelopathy Potential of Bangladesh Indigenous Rice Varieties
For qualitative & quantitative measurements of above- and below-ground interaction (exudation of novel bioactive compounds) between diverse Bangladesh rice varieties and weeds to develop self-weeding varieties and as a source of the natural compound with herbicidal activity and on the understanding of their mode of action

Post Graduate Certificate Course on Seed Technology ‖ Sher-e-Bangla Agricultural University — 2009

Thesis Title: Effect of Abiotic And Biotic Factors on Quality of Jute Seed
Assessment of the effect of biotic, abiotic factors on seed quality of jute preserved in different conventional seed containers

M.S. in Agronomy ‖ Sher-e-Bangla Agricultural University — 2008

Thesis Title: Growth and Yield of T. Aman Rice Varieties as Affected By Seedling Number Per Hill and Urea Supergranules

Find out the effect of seedling hill^{-1} and forms of nitrogen fertilizer on modern and traditional transplant *aman* rice.

Bachelor of Science in Agriculture | Sher-e-Bangla Agricultural University (SAU), Dhaka, Bangladesh — 2006

CERTIFICATIONS | DIPLOMAS

Sl. No.	Title & Authority	Year
1	Visualizing Land Cover and Land Use Change with NASA Satellite Imagery I National Aeronautics and Space Administration (NASA)	2026
2	Predictive Analytics for Climate-Sensitive Sectors I Nano Science and Technology Consortium (NSTC), India	2026
3	Space borne Lidar for Monitoring Vegetation Structure and Biomass using GEDI I National Aeronautics and Space Administration (NASA)	2025

Sl. No.	Title & Authority	Year
4	Solar Induced Fluorescence (SIF) Observations for Assessing Vegetation Changes Related to Floods, Drought, and Fire Impacts I National Aeronautics and Space Administration (NASA)	2025
5	Monitoring Global Terrestrial Surface Water Height using Remote Sensing I National Aeronautics and Space Administration (NASA)	2025
6	Ocean Sessions – Water Pollution » organized by Copernicus, the Copernicus Marine Service and Mercator Ocean International, held online on December 16th and December 18th 2025	2025
7	GIS & Remote Sensing Using ArcGIS Pro I North Bengal Information and Communication Laboratory	2025
8	GIS & Remote Sensing Using Google Earth Engine I North Bengal Information and Communication Laboratory	2025
9	Mastering Google Earth Engine (GEE) and Remote Sensing for Big Data Analysis ‖ Geospatial Science and Research Foundation	2025
10	WEkEO for Ice Monitoring Copernicus, Programme of the European Union	2025
11	Copernicus Hubs Essentials I Copernicus, Programme of the European Union	2025
12	WEkEO Essentials I Copernicus, Programme of the European Union	2025
13	Connecting Citizen Science with Remote Sensing | National Aeronautics and Space Administration (NASA)	2023
14	Fundamentals and Applied Remote Sensing ‖ Geospatial Science and Research Foundation	2022
15	Statistical Data Analysis Using Python and R for Data Science & Machine Learning ‖ North Bengal Information and Communication Laboratory	2022
16	Statistical Data Analysis Using SPSS and R for Data Science & Machine Learning ‖ North Bengal Information and Communication Laboratory	2021

Sl. No.	Title & Authority	Year
17	Fundamental of GIS ‖ Geospatial Science and Research Foundation	2021

PROFESSIONAL DEVELOPMENT & TRAINING

1. Training on Outcome-based Curriculum. Bangladesh Accreditation Council. February 15-16, 2023.
2. Training on Effective Teaching Learning and Assessment. Bangladesh Accreditation Council. February 14, 2023.
3. Training on Compliance of Bangladesh National Qualifications Framework (BNQF). Bangladesh Accreditation Council. February 13, 2023.
4. Good Agricultural Governance Focused on Smallholder Farmers. Integrated Agricultural Productivity Project, The Ministry of Agriculture, Bangladesh and The Food and Agriculture Organization of the United Nations (FAO), 2 to 6 September 2012
5. Curriculum Development, Teaching Methods, Learning Assessment, and Self-Assessment Procedure. Self-Assessment Exercise at Faculty of Agriculture of Sher-e-Bangla Agricultural University, Higher Education Quality Enhancement Project, Sher-e-Bangla Agricultural University, Dhaka-1207, 11 to 18 April 2013.
6. Training Workshop on Scientific Writing. Sponsored by Agrarian Research Foundation in Collaboration with Sher-e-Bangla Agricultural University, 27 to 29 February 2012.
7. Modern Technologies of Sugarcane and Intercrop Production. Bangladesh Sugarcane Research Institute, 19 to 23 April 2009.
8. Foundation Course, Bangladesh Sugar and Food Industries Corporation, 6 to 11 September 2008.
9. Productivity Development Strategy in Factory Level, National Productivity Organization (NPO.), Ministry of Industry, Bangladesh, 19 to 21 August 2008.

PROFESSIONAL EXPERIENCE

1. **Professor** (March 17, 2022 to till to date): Sher-e-Bangla Agricultural University, Dhaka, Bangladesh

2. **Associate Professor** (March 17, 2018, to March 16, 2022): Sher-e-Bangla Agricultural University, Dhaka, Bangladesh
3. **Research Assistant** (October 01, 2014, to March 31, 2015): University of The Ryukyus Okinawa, Japan
4. **Assistant Professor** (February 22, 2012, to March 16, 2018): Sher-e-Bangla Agricultural University, Dhaka, Bangladesh
5. **Lecturer** (February 23, 2010, to February 22, 2012): Sher-e-Bangla Agricultural University Dhaka, Bangladesh
6. **Scientific Officer** (December 23, 2009, to February 22, 2010): Bangladesh Agricultural Research Institute, Gazipur, Bangladesh
7. **Assistant Manager** (October 02, 2007, to December 21, 2009): Bangladesh Sugar and Food Industries Corporation, Dhaka, Bangladesh

RESEARCH E EXPERIENCE

1. **Principal Investigator (**2025): Assessing the combined effect of climate-smart water and weed management on weed dynamics, growth, and yield of direct-seeded *boro* rice. SAURES, Sher-e-Bangla Agricultural University Dhaka, Bangladesh.
2. **Principal Investigator (**2025): Evaluating chemical and nonchemical weed management options on the growth, physiology, nutrient uptake, and yield of seed cotton (*Gossypium hirsutum* L.). Ministry of Science and Technology, Bangladesh
3. **Principal Investigator (**2024): Climate-smart water management and determination of the critical period of weed competition in direct seeded rainfed *aman* rice. SAURES, Sher-e-Bangla Agricultural University Dhaka, Bangladesh.
4. **Principal Investigator (**2024): Emergence of *Parthenium hysterophorus* as influenced by ecological parameters relates to its invasiveness in Bangladesh. UGC, Bangladesh.
5. **Principal Investigator (**2023): Efficacy of biochar, superabsorbent (Zeba), and Zeba coated urea on the growth, yield, and quality of quinoa (*Chenopodium quinoa* Wild.) under soils of Char land of Bangladesh. Ministry of Science and Technology, Bangladesh
6. **Principal Investigator (**2023): Effect of herbicides on the growth, seed yield and quality of quinoa (*Chenopodium quinoa*). SAURES, Sher-e-Bangla Agricultural University Dhaka, Bangladesh.

7. **Principal Investigator (**2022): Emergence of *Parthenium hysterophorus* as influenced by ecological parameters relates to its invasiveness in Bangladesh. Bangladesh University Grant Commission.
8. **Principal Investigator (**2022): Impact of land use and land cover (LULC) changes and climate change on the spatial distribution of *Parthenium hysterophorus* in Bangladesh. Ministry of Science and Technology, Bangladesh
9. **Principal Investigator (**2022): Bio-efficacy of pyrazosulfuron-ethyl + pretilachlor (ready-mix) in biochar amended soils against weeds in transplanted aman rice and its residual effects. SAURES., Sher-e-Bangla Agricultural University Dhaka, Bangladesh
10. **Principal Investigator (**2021): Interactive effect of nitrogen and pendimethalin plus bispyribac-sodium rates under dry direct-seeded conditions of *aus* rice. SAURES., Sher-e-Bangla Agricultural University Dhaka, Bangladesh
11. **Principal Investigator (**2021): Invasive weed parthenium (*Parthenium hysterophorus*) response to chemical and allelopathic extracts at different stages. Ministry of Science and Technology, Bangladesh
12. **Principal Investigator (**2020): Influence of herbicides on the increasing growth, yield, and controlling weeds in direct-seeded *aus* rice of Bangladesh. SAURES., Sher-e-Bangla Agricultural University Dhaka, Bangladesh
13. **Principal Investigator** (2021): Assessing the Impact and Management of Parthenium Weed (*Parthenium hysterophorus*) and a look to the Future in Bangladesh. Ministry of Science and Technology, Bangladesh
14. **Principal Investigator** (2020): Morphological and Phenological Variability of *Echinochloa* Accessions of Bangladesh and the Link with Herbicide Sensitivity. SAURES, Sher-e-Bangla Agricultural University Dhaka, Bangladesh
15. **Principal Investigator** (2020): Density, Abundance and Allelopathic Effect of Parthenium Weed (*Parthenium hysterophorus*) in Natural and Agro-Ecosystems in South-West Region of Bangladesh. Ministry of Science and Technology, Bangladesh.
16. **Principal Investigator** (2018): Screening of Allelopathic Potential Bangladesh Wheat (*Triticum aestivum* L.) Varieties. SAURES, Sher-e-Bangla Agricultural University Dhaka, Bangladesh

17. **Co-investigator** (2019): Effect of Industrial Wastewater on the Change of Soil Chemical Properties and Accumulation Plant Nutrient and Heavy Metals in Agricultural Land Areas of Bhaluka, Mymensingh. Ministry of Science and Technology, Bangladesh
18. **Co-investigator** (2013): Performance of Rapeseed and Mustard with Different Planting Techniques. Ministry of Science and Technology, Bangladesh
19. **Co-investigator** (2011-2013): Research Facilities Improvement in SAU Higher Education Quality Enhancement Project (HEQEP), UGC, Bangladesh

INVOLVEMENT IN PROFESSIONAL SOCIETY AND ORGANIZATION

1. **Assistant Treasurer**: Bangladesh Society of Agronomy
2. **Former General Secretary**: Bangladesh Weed Science Society
3. **Former Assistant Publication Secretary**: Bangladesh Society of Agronomy
4. **Life Member**: Bangladesh Weed Science Society
5. **Life Member**: Bangladesh Society of Agronomy
6. **Life Member**: Bangladesh Seed Science Society
7. **Life Member**: Bangladesh Academy of Science
8. **Life Member**: Krishibid Institution of Bangladesh
9. **Life Member**: Ecological Society of Bangladesh
10. **General Member**: Asia Pacific Weed Science Society
11. **General Member:** Weed Science Society of Japan
12. **General Member**: Crop Science Society of Japan

ACTIVITIES AS REVIEWER

- Advances in Agriculture
- Annals of Agricultural Sciences
- BMC Plant Biology
- Bangladesh Agronomy Journal
- Bangladesh Journal of Weed Science
- Ecology and Evolution
- Frontiers in Plant Science
- International Journal of Plant & Soil Science
- Journal of Environmental Science and Health, Part B
- Mindanao Journal of Science and Technology
- Notulae Scientia Biologicae
- Open Agriculture
- Physiology and Molecular Biology of Plants
- Phytoparasitica
- Plant Production Science
- Plant Science Today
- Sarhad Journal of Agriculture

- Scientific Report
- Universal Journal of Plant Science
- Universal Journal of Agricultural Research
- Weed Biology and Management

ACTIVITIES AS EDITOR

- Editorial Board Member: Journal of Agronomy Research
- Guest Editor: Plant Science Today
- Former Assistant Editor: Bangladesh Agronomy Journal
- Former Assistant Editor: Bangladesh Journal of Weed Science

SCHOLARSHIPS & AWARDS

Japanese Government Scholarship (MEXT), Japan 2014

PEER-REVIEWED JOURNAL ARTICLES

1. Neela, M.M.N.B., Sourav, T.A., Hasanuzzaman, M. and **Masum, S.M.** (2026). Critical period of weed control and herbicide performance in quinoa (*Chenopodium quinoa* Willd.).*Sarhad J. Agric.* **42**(2): 609=619.
2. Asaduzzaman, M., Mandal, M.S.H., Koetz, E., Rahman, A. and **Masum, S.M.** (2026). Prediction to prevention: Comparative machine learning models for early intervention of *Dactyloctenium radulans* in Australia. *Rangel. Ecol. Manag*. **106**: 108-119.
3. Masud, M.A.A., Haque, M.M., Wahid, M.T., Sourav, T.A. and **Masum, S.M.** (2025). Weed management through allelopathic interaction of Bangladeshi mustard varieties. *Bangladesh J. Weed Sci.* 8(1&2): 51-64.
4. Hossain, I., Hosneara, Hossain, A., **Masum, S.M.** and Islam, Z. (2025). Effects of herbicides on the growth and yield of wheat. *Bangladesh J. Weed Sci.* **8**(1&2): 1-6.
5. Habib, Z.F.B., Islam, F., Rasel, S.H., Mahmud, J.A., Sayeed, K.M.A., **Masum, S.M**. and Munsur, M.A.Z. (2025). Impact of different varieties and biochar on rice productivity. *Egyptian J. Agronomy*, **47**(4): 1279–1287.
6. Sonya, J.F., Sourav, T.A., Hasanuzzaman, M., Islam, A.B.M.J., and **Masum, S.M.** (2025). Effectiveness of pretilachlor and pyrazosulfuron-ethyl with the application of biochar against weeds under rainfed aman rice relay planted with mustard. *Univers. J. Agric. Res.* **13**(3): 13(4): 33-44.
7. Shohan, M.T.A., Ali, M.H., Hasanuzzaman, M., Malek, M. and **Masum, S.M.** (2025). Laboratory and field screening of allelopathic potential bread wheat (*Triticum aestivum* L.) varieties in Bangladesh. *Bangladesh J. Agri.* **50**(1): 83-94.
8. Bhuiya, A.A.F., Baque, M.A., Sakib, M.N., Islam, F., Ahmed, F., Malek, M., **Masum, S.M.** and M. Hasanuzzaman (2025). Suitability of rapeseed-mustard varieties as a relay with T. *aman* rice. *Bangladesh J. Agri.* 50(2): 69-84.
9. Akter, N., Ullah, M.J., Hasan, M., Mim, N.J. and **Masum, S.M.** (2025). Dry matter partitioning and harvest index of SAU white maize-1 as influenced by urea top dressing and weed management methods. *J. Expt. Biosci.* 16(2):13-24.

10. Liza, M.M., Hasan, M.M., Khan, M.R.H., Saha, A., Tuly, F.H. and **Masum, S.M.** (2024). Effect of irrigation intervals and mulching material on the growth and yield of maize. *Bangladesh Agron. J.* 27(2): 90-95.
11. Sultana, S., Amin, A.K.M.R., Sourav, T.A., Khan, M.R.H., Islam, A.B.M.J., and **Masum, S.M.** (2024). Effects of nitrogen and different rates of pendimethalin with bispyribac-sodium. *Bangladesh Agron. J.* 27(2): 61-69.
12. **Masum, S.M**., Sultana, S., Amin, A.K.M.R., Sourav, T.A. and Islam, A.B.M.J. (2024) Effect of nitrogen and pendimethalin fb. bispyribac-sodium rates under dry direct-seeded condition of aus rice. *J. Agri. Sci. Eng.* **6**(4): 176-188.
13. Aziz, K.M.T., Razia, S., Ali, M.H., Hasanuzzaman, M., Sourav, T.A. and **Masum, S.M.** (2024).Growth and yield performance of mustard and rapeseed varieties as influenced by different sowing techniques. *Bangladesh Agron. J.* **26**(2): 86-99.
14. Bushra, F.T.Z., Sourav, T.A., Sarker, S.C. and **Masum, S.M.** (2024). Effect of bispyribac-sodium and spacing on the weed control and performance of aromatic rice varieties. *Bangladesh Agron. J.* **26**(2): 56-66.
15. Hasanuzzaman, M., Rana, M.S., Islam, F., Mollick, M.O.A. and **Masum, S.M**. (2024). Effects of sowing date and cutting management on the grain and fodder yield of barley. *Bangladesh J. Agri. Res.* **49**(1): 10-18.
16. Razia, S., Ali, M.H., Baque, M.A., Aziz, K.M.T., Sourav, T.A., and **Masum, S.M**. (2024). Growth and yield of rapeseed (*Brassica campestris*) as affected by sulfur and boron fertilizer. *J. Expt. Biosci*. **15**(1):111-124.
17. Sonia, I.A., Amin, A.K.M.R, Biswas, P.K., Sourav, T.A. and **Masum, S.M.** (2024). Effect of variety and sowing dates on the growth and yield of wheat. *J. Expt. Biosci*. 15(1): 85-96.
18. Khatun, M.S. Biswas, P.K., Yeasmin, M., Akhi, S.S., Mehraj, H. and **Masum, S.M.** (2023). Prevalence and allelopathic effect of *Parthenium hysterophorus* on crops in southwest regions of Bangladesh. *Ecol. J.* 5(2) : 155-161
19. Saba, M.N., Ullah, M.J., Ali, M., Hossain, M.B. and **Masum, S.M**. (2023).The manual, chemical, cultural, and integrated weed management in soybean production. *SAARC J. Agric*. 21(2): 195-206.
20. Wahid, T., Ali, M.H., Masud, A.A., Malek, M. and **Masum, S.M.** (2023). Effect of free-floating plants on weed emergence, growth, and yield of transplanted *aman* rice varieties. *Innovare Journal Agri. Sci.* **11**(6):1-9.
21. Jame, Z.H., Zahan, T., Hossain, H.M.M., Roy, P.S. and **Masum, S.M.** (2023). Efficacy of herbicide mixtures for transplanted *aman* rice in silty clay loam soil of Bangladesh. *Bangladesh Agron. J.* **26**(1): 56-74.
22. Akter, M., Bhuiyan, M.K.A. and **Masum, S.M.** (2023). Determination of economic nitrogen rate for transplanted *aus* rice varieties of Bangladesh. *Bangladesh Agron. J.* **26**(1): 84-95.
23. Huda, M.N., **Masum, S.M.**, Mollick, M.O.A. and Khan, M.A. (2023). Effect of fertilizer on the growth and yield of *boro* and T. *aman* rice in the soils of industrially polluted agricultural land areas of Madhupur Tract. *Bangladesh Agron. J.* **26**(1): 112-121.

24. Roy, P.S., Ali, M.S., Islam, O., Islam, M. and **Masum, S.M**. (2023). Effect of population density and variety on growth and yield of mungbean. *J. Expt. Biosci.* **14**(2): 15-24
25. **Masum, S.M**., Nowroz, F., Talha, M.A., Islam, M., Jalal, M.J. and Uddin, M.A. (2023). Invasive weed *Parthenium hysterophorus*: responses to chemical and allelopathic extracts at different stages. *SAARC J. Agric*. 21(1): 239-252.
26. **Masum, S.M**., Hasanuzzaman, M., Malek, M., Jalal, M.J. and Razzaque, M.A. (2022). Morphological and phenological variability of *Echinochloa* accessions and their herbicide sensitivity. *J. Sher-e-Bangla Agric. Univ*. **13**(1): 1-9
27. **Masum, S.M**., Halim, A., Mandal, M.S.H., Asaduzzaman, M. and Adkins, S. (2022). Predicting current and future potential distributions of *Parthenium hysterophorus* in Bangladesh using Maximum Entropy Ecological Niche Modelling. *Agronomy*. **12**(7): 1592.
28. Akram, M., Ali, M. H., Islam, S. **Masum, S. M**., Malek, M. and Hasanuzzaman, M. (2021). Jute growth and yield influenced by integrated weed management. *Bangladesh J. Weed Sci.* 7(1&2): 1-14.
29. Hossain, I., Faruq, G., Ali, M. H. and **Masum, S.M**. (2021). Effect of newly developed herbicides on the growth and yield of wheat under strip tillage system in Bangladesh. *Bangladesh J. Weed Sci*. 7(1&2): 31-38.
30. Hossain, I., Zahan, T., Ali, M. H., Tiwary, T.P., Hossain, A. and **Masum, S.M**. (2021). Weed management in wheat-mungbean-rice cropping pattern under conservation agriculture in drought-prone areas. *Bangladesh J. Weed Sci.* 7(1&2): 39-49.
31. Malek, M., Ali, M.H., Karim, M.F., Ullah, M.J., Paul, A.K., Moniruzzaman, M. and **Masum, S.M**. (2022). Effect of varied nutrient levels on the growth performance and yield of Bangladesh sesame (*Sesamum indicum* L.) varieties. *J. Expt. Biosci*. 13(1): 31-42.
32. Malek, M., Ali, M.H., Karim, M.F., Ullah, M.J., Paul, A.K. and **Masum, S.M.** (2021). Performance of sesame (*Sesamum indicum* L.) varieties under varied nutrient levels. *Bangladesh Agron. J*. 24(2): 31-41.
33. Akhtar, S., Ullah, M.J., Hamid, A., Islam, M.S., Ahamed, M.K.U. and **Masum, S.M.** (2021). Influence of sowing dates on the phenological development, growth, and yield of white maize genotypes. *Bangladesh Agron. J.* 24(1): 57-70.
34. **Masum, S.M**., Akamine, H., Hossain, M.A., Sakagami, J.I., Ishii T. and Gima, S. (2020). Assessment of the allelopathic potential and identification of the phytotoxic substances from the straw of Bangladeshi indigenous rice variety 'GORIA'. *Appl. Ecol. Environ. Res*. 18(4): 5547-5560.
35. Sonet, R. A., Ali, M. H. Amin, A. K. M. R. Haque, M. N. and **Masum, S. M.** (2020). Influence of phosphorus levels on growth and yield of four lentil varieties. *Bangladesh Agron. J.* 23(1): 29-36.
36. **Masum, S.M**., Hossain, M.A., Akamine, H., Sakagami, J.I., Ishii, T., Konno, T., Nakamura, I. Assaduzzaman, M and Bowmik, P.C. (2019). Performance of Bangladesh indigenous rice in a weed infested field and separation of allelopathy from resource competition. *Weed Biol. Manag.* **19**(2): 39-50.

37. **Masum, S.M.,** Hossain, M.A., Akamine, H., Sakagami, J.I., Ishii, T., Konno, T. and Nakamura, I. (2019). Comparison study of allelochemicals and bispyribac-sodium on the germination and growth response of *Echinochloa crus-galli* L. *J. Plant Growth Regul.* **38** (2):501–512.

38. Biswas, P.K., Ferdous, L.J., Roy, T.S. and **Masum, S.M.** (2019). Performance of rapeseed and mustard with different planting techniques. *Bangladesh Agron. J.* 22 (1): 79-88.

39. **Masum, S.M.,** Hossain, M.A., Akamine, H., Sakagami, J.I., Ishii, T., Gima, S., Kensaku, T. and Bowmik, P.C. (2018). Isolation and characterization of allelopathic compounds from the indigenous rice variety 'Boterswar' and their biological activity against *Echinochloa crus-galli* L. *Allelopathy J.* **43**: 31-42.

40. Ferdous, J., Ali, M.H., Islam, M.S., Chowdhury, I.F., Haque, M.N. and **Masum, S.M.** (2017). Growth and yield of soybean as affected by irrigation and weed control methods. *Bangladesh J. Weed Sci.* **6** (1&2): 17-26.

41. **Masum, S.M**., Hossain, M.A., Akamine, H., Sakagami, J.I. and Bowmik, P.C. (2016). Allelopathic potential of indigenous Bangladeshi rice varieties. *Weed Biol. Manag.* **16 (3)**:119-131.

42. Akter, N., Amin R., **Masum, S.M.** and Haque, M.N. (2016). Effect of sowing dates and weed control methods on yield components of soybean (*Glycine max* L. M.E.R.R.I.L.L.). *Pak. J. Weed Sci. Res.* **22** (4): 527-541.

43. Akter, N., Amin, A.K.M.R., Haque, M.N. and **Masum, S.M.** (2016). Effect of sowing date and weed control method on the growth and yield of soybean. *Poljoprivreda*. **22** (1): 19-27.

44. Khanam, M., Islam, M.S., Ali, M.H. Chowdhury. I.F. and **Masum, S.M**. (2016). Performance of soybean under different levels of phosphorus and potassium. *Bangladesh Agron. J.* 19: 99-108.

45. Zaman, H., **Masum, S.M.**, Ali, M.H., Biswas, P.K., Mandal, M.S.H. and Mehraj, H. (2015). Tiller production and yield improvement of T. aman rice varieties through wider spacing. *Middle-East J. Sci. Res.* **23**: 1114-1121.

46. Haque, M. N., Ali, M.H., Roy, T.S., **Masum, S. M**. and Chowdhury, I. F. (2015). Yield reduction and arsenic accumulation in potatoes (*Solanum tuberosum* L.) in an arsenic contaminated soil. *Agron. Colomb.* **33**(3): 315-321.

47. Haque, M. N., Ali, M.H., Roy, T.S., **Masum, S. M**. and Hossain, M. N. (2015). Growth performance of fourteen potato varieties as affected by arsenic contamination. *J. Plant. Sci.* **3**(1): 31-44.

48. Nahar, L., Ali, M. H., **Masum, S. M.**, Mahbub, M. M. and Haque, S. R. (2015). Performance of prilled urea and urea super granules on the growth and yield of wheat. *Bangladesh Agron. J.* **18**(1): 37-48.

49. Mandal, M. S. H., Ali, M. H., Amin, A. K. M. R., **Masum, S. M**, and Mehraj, H. (2015). Influence of source of nitrogen on growth and yield of wheat. *Intl. J. Agron. Agric. Res.* **6**(1): 89-95.

50. **Masum, S. M**., Ali, M. H., Hasanuzzaman, M., Chowdhury, I. F., Mandal, M. S. H. and Jerin, R. (2014). Response of variety and population density on yield attributes and yield of boro rice (*Oryza sativa*). *Ann. Agric. Res*. **35**(4): 355-361.

51. **Masum, S**.M., Ali, M.H., Chowdhury, I.F., Manadal, M.S.H. and Haque, M.N. (2014). Effect of N.P.K. and plant extracted pyroligenous acid on yield of *boro* rice. *Bangladesh Agron. J.* **17**(2): 95-97.

52. Mandal, M.S.H., Ali, M.H., Amin, A.K.M.R., **Masum, S.M.**, Mehraj, H. (2014) Assessment of different weed control methods on growth and yield of wheat. *Intl. J. Agron. Agric. Res.* **5**: 65-73.

53. **Masum, S.M**., Hasanuzzaman, M. and Ali, M.H. (2013). Threats of *Parthenium hysterophorus* on agro-ecosystems and its management: a review. *Intl. J. Agri. Crop Sci.* **6**(11): 684-697.

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2	Climate Security in the Asia Pacific under a Shifting Geopolitical Context I APCS International Symposium, 21-22, January 2026, Osaka, Sapporo, Tokyo	2026
3	Programme for the Fourth International Workshop of the IOBC Global Working Group on Biological Control and Management of Parthenium Weed Virtual Workshop (via MS Teams) 7 & 8 April 2025	2025

Achievement

Award: Weed Science Award 2026 by the Weed Science Society of Bangladesh, 2026

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