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Educational Qualification

Master in Environmental Engineering

Suzhou University of Science and Technology, China

September 2022-July 2024

Master of Science in Sustainable Agriculture and Food Security

Bangladesh Agricultural University, Mymensingh

January 2017-January 2019

Bachelor of Science in Agricultural Engineering

Bangladesh Agricultural University, Mymensingh

January 2012-December 2016

Professional Experience

Scientific Officer, Irrigation and Water Management Division

October 2019-Present

Bangladesh Rice Research Institute (BRRI)

- Involved in Developing Technologies that Permit More Efficient Water Use
- Assessed Cropping Pattern that Increases Crop Production in the Irrigated Environment
- Applied Engineering Principles in Crop Production

Ongoing Research Program

- Evaluation of Drought Tolerance Ability of Newly Released BRRI Variety in Drought Prone Area
- Yield and Water Productivity of Boro Rice Affected by Transplanting Time and Water Management
- Determining Minimum Irrigation Water Requirement of Rice in Different Regions of Bangladesh through Water Balance from On-Farm Demand and Model Simulation
- Irrigation Water Requirement and Rainfall Utilization for Delayed Transplanting of Boro Rice
- Present Status and Potentiality for Increasing Rice Cultivation in Surface Water Irrigation of Bangladesh
- Upscaling of Improved Water Management Practices for Sustainable Productivity in the Haor Areas

Research Interests

Water Quality, Wastewater Treatment, Soil and Water System, Irrigation and Drainage, Water Resources Management, Water Modeling, Environmental Engineering, Drought Mitigation, GIS and remote Sensing

Publications

- Hossain, M.B., Roy, D., Paul, P.L.C., Yesmin, M.S., Kundu, P.K., **Pranto, M.R.B.H.** “Strategies of water resource utilization and agricultural water management in the coastal saline zone of Bangladesh.” In *Irrigation and Drainage*, 2024. [DOI](#)
- Roy, D., Hossain, M.B., **Pranto, M.R.B.H.**, Islam, M.T. “Drought Management by Integrated Approaches in T. Aman Rice Season to Escalate Rice Productivity in Drought Prone Regions of Bangladesh.” In *Springer*, 2022 [DOI](#)
- **Pranto, M.R.B.H.**, Hossain, M.B., Roy, D., Paul, P.L.C., Tanha, A.N. “Suitability of Municipal Wastewater for Crop Irrigation in Mymensingh Municipality Area of Bangladesh.” In *The Agriculturists*, 2021 [Link](#)
- Roy, D., Mahmud, M.N.H., Paul, P.L.C., Hossain, M.B., Yesmin, M.S., **Pranto, M.R.B.H.**, Islam, M.T. “Paddy Field Water Movement Through Soil Profiles Under Different Water Management Practices: A HYDRUS 1D Model Study.” In *Bangladesh Rice Journal*, 2021 [DOI](#)
- Islam, A.K.M.S., Alam, M.A., Kamruzzaman, M., Islam, M.M., Bhuiyan, M.G.K., **Pranto, M.R.B.H.** “Business Viability of Small Combine Harvester in Haor Areas.” In *European Journal of Agriculture and Food Sciences*, 2021 [DOI](#)
- Kundu, P.K., Parvez, M.F., Acharjee, D.T.K., Debnath, A., **Pranto, M.R.B.H.** “Rainfall Induced Saline Soil Management through Leaching.” In *North American Academic Research*, 2020 [DOI](#)
- Hossain, M.Z., Hasanuzzaman, K.M., Islam, M.A., Rahman, M.A., Bary, S.Z., **Pranto, M.R.B.H.** “Hydraulic properties of buried pipe distribution system in different schemes.” In *International Journal of Experimental Agriculture*, 2020 [Link](#)

- Hossain, M.Z., Sarker, M.A., Islam, M.A., Pranto, M.R.B.H., “Evaluation of improved earthen canal, pre-cast canal and buried pipe irrigation systems based on water losses.” In *International Journal of Applied Research*, 2018 [Link](#)

Workshops

- Inception Workshop on Intervention in Surface Water Utilization through Integrated Minor Irrigation Schemes for Escalating Water and Land Productivity in Coastal Region, 7 April 2021
- Inception Workshop on Upscaling of Improved Water Management Practices for Sustainable Productivity in the Haor Areas, 10 January 2022
- Commonwealth Scientific and Industrial Research Organization (CSIRO) and University of Southern Queensland (USQ) Funded Inception Workshop on "Groundwater Sustainability and Rice Production in North-West Bangladesh", 16 January 2022

Professional Development (MOOC platform)

- “Soil and Water Conservation Engineering - Introduction to Soil Erosion”
- “Water Resources Management and Policy” from the University of Geneva
- “The Sustainable Development Goals – A global, transdisciplinary vision for the future”
- “Global Environmental Management” from Technical University of Denmark

Training

- GIS and Remote Sensing Application to Assess Suitable Surface Water Resources for Crop Production
- Advanced Research Data Management using R Studio
- Research Methodology Training
- Scientific Report Writing
- Project Monitoring and Reporting

Courses Learned

Ground Water Engineering, Pumps and Wells, Soil Water Conservation Engineering, Irrigation and Drainage Engineering, Fluid Mechanics, Hydraulics, Soil Science, Agricultural Statistics, Environmental Science etc.

Statistical Analysis & Programming

- Python
- GIS
- R
- CropStat

Membership

- Institution of Engineers, Bangladesh (M-44735)
- Krishibid Institution of Bangladesh (05-16-29621)

Awards

- Ministry of Commerce (MOFCOM) scholarship funded by the Government of People's Republic of China

References

Dr. Chayan Kumar Saha

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Bangladesh Agricultural University

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Dr. Debjit Roy

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