

# Atikur Rahman, Ph.D.

702 Santee Street #4303, Prairie View, TX 77445; cell: 701.850.6115; email:  
atrahman@pvamu.edu

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## Key Profile Overview & Qualifications:

- 14+ years of professional experience working in academic (teaching & research) institutions.
- Developed algae cultivation techniques, algal-based biofuel, and improved nutrient removal from wastewater in algae cultivation.
- Worked in water pollution control using conservation techniques (vegetative filter strips), nutrient transport, wastewater treatment and energy recovery by microbial fuel cells, modeling climate change & crop production, and irrigation scheduling.
- Modeled crop growth and yield, transport of pollutants including sediment and nutrients, and hydrological processes. Skilled in FORTRAN and MATLAB programming languages, data analysis, and geospatial analysis using different software platforms.
- Performed manure, soil, air, and water sampling data collection/acquisition, equipment troubleshooting, soil and water quality monitoring and assessment, and laboratory chemical and data analyses.
- Published research findings in peer-reviewed journals on a regular basis.
- Demonstrated excellent writing, oral, and interpersonal communication skills and presented technical papers at national and international conferences.
- Possess strong work ethics and management and dedicated professional responding to new challenges and building relationships.

**Residency status:** Lawful US permanent resident.

## Education:

- *Ph.D., Agricultural and Biosystems Engineering* (CGPA 3.81)  
North Dakota State University, Fargo, ND, USA December 2013
- *M.S., Irrigation and Water Management* (CGPA 3.86)  
Bangladesh Agricultural University, Mymensingh, Bangladesh August 2007
- *B.S., Agricultural Engineering (First class, first position)* May 2005  
Bangladesh Agricultural University, Mymensingh, Bangladesh

## Work Experience:

- Research Associate Professor**, Prairie View A&M University Mar 23 to date
- Postdoctoral Researcher**, Prairie View A&M University Aug '21 to Feb 23
- Developing irrigation scheduling tools and establishing weather networks.

- Assisting projects related to watershed hydrology, extreme hydrological events prediction and evaluation, impacts of land use/cover changes on hydrologic processes, and evaluation of decision support systems for agricultural and landscape settings, irrigation, and nutrient best management practices in a changing climate.
- Performing numerical modeling using spatial and temporal data analyses.
- Writing scientific reports, peer-reviewed journal articles, and research proposals to continue and/or extend research works.
- Participating in extension and outreach activities.
- Assisting students, researchers, and technicians.
- Assisting in achieving the university's commitment to excellence in teaching, research, and service.

**Research Associate**, Mayville State University Jul '21 to Aug 21

- Extracted wheat bran-based biopolymers for medical research.
- Developed wheat bran-based biopolymers for wastewater dye removal.

**Professor**, Bangladesh Agricultural University Jan '18 to Jun '21

**Chair** Jan '18 to Feb '20

Department of Irrigation and Water Management, Bangladesh Agricultural University

- Conducted examinations for undergraduate and graduate degree programs.
- Supervised staff, planned budgets, and did activities related to the smooth running of the office.
- Served in different committees, developed syllabuses, and updated Agricultural Engineering degree curricula.
- Worked as a focal point for collaboration and communication with government and other organizations.

**Associate Professor**, Bangladesh Agricultural University Jan '14 to Nov '15; Dec '17 to Jan '18

- Taught graduate and undergraduate courses.
- Supervised graduate and undergraduate research.
- Authored peer-reviewed articles and delivered lectures.
- Writing grant proposals and hunting funds.

**Research Associate**, Mayville State University Dec '15 to Nov '17

- Worked on pretreatment and use of wheat bran for making thermoplastic composites.
- Wrote grant proposals for funding research.
- Published research findings in peer-reviewed journals.

**Adjunct Faculty**, Mayville State University Dec '15 to Nov '17

- Taught Physical Science and Biology lab courses.

**Assistant Professor**, Bangladesh Agricultural University Jan '09 to May '09; Nov '13 to Jan '14

- Taught graduate and undergraduate students.
- Supervised graduate and undergraduate research.
- Authored peer-reviewed papers and delivered lectures.

**Lecturer**, Bangladesh Agricultural University Jan '07 to Jan '09

- Taught undergraduate students as well as authored and delivered lecture materials.
- Demonstrated laboratory experiments.
- Evaluated exam papers.
- Conducted field visits and worked as a house tutor in a student dorm.

**Graduate Research Assistant**, ND State University, Fargo, ND

May '09 to Dec '13

*Algae production for bioenergy generation and wastewater treatment:*

- Prepared growth medium and cultured microalgae to be used for inoculation.
- Grown microalgae in nutrient-rich wastewater and distilled water maintaining light intensity and light-dark cycle.
- Monitored algae growth by measuring optical density and total volatile suspended solids (TVSS).
- Analyzed untreated and treated effluent for nutrients, optical density, TVSS, and dry weight.
- Assisted prepare project progress and completion reports.

*Feedlot runoff pollution control using vegetative filter strips:*

- Demonstrated and evaluated vegetative filter strips.
- Assisted in fieldwork for soil, air, and wastewater sample collection.
- Monitored greenhouse gases and indoor air quality from animal facilities.
- Managed agricultural waste through composting.
- Analyzed manure, air, wastewater, and soil samples in the Wastewater Lab.
- Experienced in using various air, soil, and water testing equipment.
- Reported results and wrote manuscripts.

*Wastewater treatment:*

- Used microbial fuel cell technique to treat and recover energy from beet sugar factory wastewater.
- Studied the effect of pollutant concentration on wastewater treatment and electricity generation.

*Modeling and simulation of nutrients transport:*

- Modeled and simulated nitrogen and phosphorus transport through vegetative filter strips.
- Used of artificial neural network for predicting nutrient/sediment movements from the feedlot.

**Agricultural Engineer**, District Agriculture Office, Bangladesh

Jun '06 to Dec '06

- Developed water resources and disseminated new irrigation technologies.
- Designed underground pipe systems and over-ground canal systems for conveying water.
- Designed reservoir and flood protection structures and participated in flood fighting activities.
- Conducted farmers' training on using various irrigation water-saving technologies.
- Conducted technicians' training on various agricultural equipment and machinery, including irrigation equipment.
- Popularized various small-scale tillage equipment.

**Training and Short Course Attended:**

Water Initiative South Asia (WISA) Workshop. Istanbul, Turkey, from 19th to the 27th July 2018. Organized jointly by Imperial College London and the British Council.

Data Acquisition, Preprocessing and Modelling Using SWAT. UNESCO-IHE, Delft, The Netherlands. 14 to 29 September, 2015.

Training on Project Cycle Management. Graduate Training Institute, Bangladesh Agricultural University, Mymensingh. 4 to 11 May, 2014.

Training of Trainers (ToT) Course on “Concept and Practice of Integrated Water Resources Management”. Center for Environmental and Geographic Information Systems (CEGIS), Dhaka, Bangladesh. 18 to 23 March, 2014.

Training of Trainers on “Integrated Water Resources Management” organized jointly by WARPO, BWP, and CEGIS, Bangladesh. 9 to 14, December 2007.

### **Courses Taught:**

- Aquacultural Engineering
- Soil and Water Conservation Engineering
- Fluid Mechanics and Hydraulics
- Groundwater Engineering
- Groundwater Development
- Agricultural Meteorology
- On-Farm Water Management
- Crop Climatology
- River Engineering and Flood Management
- GIS in Water Resources
- Irrigation Systems Evaluation
- Physical Science (lab)
- Biology (lab)

### **Research Interests:**

- Smart irrigation scheduling
- Emerging algae-based products developments and their usage
- Non-point source pollution control and water quality
- Wastewater treatment and energy recovery
- Modeling transport and fate of nutrients and environmental systems
- Biogeochemistry, nutrient recycling, and ecological interactions
- Crop modeling, crop climatology, and climatic change

### **Professional Memberships and Activities:**

- American Society of Agricultural and Biological Engineers (ASABE)
- Institution of Engineers of Bangladesh
- Bangladesh Society of Agricultural Engineers
- Outstanding student member of Alpha Epsilon honor society of Agricultural, Biological and Food Engineers, 2010 to present

**Award/Fellowships:**

- Received Graduate Research Assistantship. Department of Agricultural and Biosystems Engineering, North Dakota State University, Fargo, ND, USA.
- Received “North Dakota Water Resources Research Institute Fellowship” in 2012 from the United States Geological Survey (USGS).
- Awarded “Frank Bain Graduate Scholarship” in 2010 and 2012 from the College of Agriculture, Food Systems and Natural Resources, North Dakota State University for academic achievements.
- Awarded ‘Prime Minister Gold Medal Award 2006’ by the University Grants Commission of Bangladesh (UGCB) for excellent academic achievement at the undergraduate level.

**Completed Project:**

Modeling groundwater pollution potential from double-cropping rice cultivation systems. Project number 218/642/BAU, funded by the Bangladesh Agricultural University Research System.

Phosphorus sorption characterization of some Bangladeshi soils as affected by manure application to reduce water pollution (Surrendered due to absence on leave).

**Computer and Software Proficiencies:**

MS Office• ArcGIS• QGIS• ENVI• WMS• Win TR-55• HEC-HMS• VFSMOD-W• SPAW-Hydrology• FORTRAN• MATLAB• R• LoggerNet• Auto CAD 2D/3D• MODFLOW• SAS• SWAT• DSSAT• RZWQM.

**Instrument Skills:**

QuickChem 8500 Flow Injection Analyzer• Gas Chromatography (GC)• Spectrophotometer• ISCO 6712• FTIR• SEM• Screw Extruding• Injection Molding• DMA• YSI ProPlus Hand-Held Meter• Bechman-Coulter pH and Conductivity Meter• Bout Infiltrimeter• Data Logger• Drager CMS• MiniVol Portable Air Sampler• Colilert-18• Jerome Meter• Various Moisture Meters• Gastec Detector Tube• A2Z Ozone Generator• FTIR• HYPROP• WP4C• LI8100 CO<sub>2</sub> Gas Flux Systems.

**Reviewer of Journals:**

Transactions of the ASABE  
Environmental Monitoring and Assessment Journal  
Applied Engineering in Agriculture  
Journal of Sustainable Bioenergy Systems  
Limnologica  
Agricultural and Forest Meteorology  
Theoretical and Applied Climatology  
Applied Water Science

**Leadership and Involvement:**

Bangladesh Student Organization, North Dakota State University

- Organized various social and cultural programs and volunteered in social work.

Circle K international, North Dakota State University

- Actively participated in various volunteering and leadership development programs.

Agrivarsity Rotaract Club, Bangladesh Agricultural University

- Actively participated in various volunteering, social works, and leadership development programs, such as food and cloth donations to needy people, and organized training campaigns.

### **Extracurricular Activities:**

Served as a soccer Coach for the Agricultural Engineering team and actively participated in school cricket and soccer tournaments in Bangladesh.

### **Manuscripts in preparation:**

1. Sraboni, A., A.K. Hasan, and A. **Rahman**. 2022. Investigation of nitrate leaching from rice cultivation for different fertilizer application rates in a lysimeter study.
2. **Rahman, A.**, A. V. Veettil, B. Thapa, R. Awal, A. Fares, A. Elhassan, and N. Melaku. 2023. Climate-smart practices and fate of soil carbon under a sweet corn cropping system.
3. **Rahman, A.**, A. V. Veettil, B. Thapa, R. Awal, A. Fares, A. Elhassan, and N. Melaku. 2023. Nitrogen level and health status assessment using optical sensor-based and machine learning approach of sweet corn grown with amendments.

### **Manuscripts under Review:**

1. Ripendra Awal, A. **Rahman**, Anoop Valiya Veettil, Ali Fares, Almoutaz Elhassan, and Selamawit Woldesenbet. 2023. Assessing the Response of Sweet Corn to Organic Amendment Types and Rates Using SPAD and NDVI Sensors (Remote Sensing).
2. **Rahman, A.** and M. A. Mojid. 2022. Estimating solar irradiance using daily air temperatures in the northeast region of Bangladesh. *Atmosfera* (Under review).

### **Peer-reviewed Publications:**

1. Awal, R., A. **Rahman**., A. Fares, and H. Habibi. 2022. Calibration and Evaluation of Empirical Methods to Estimate Reference Crop Evapotranspiration in West Texas. *Water*, 14(19): 3032
2. Siddik, M.S., S.S. Tulip, A. **Rahman**, M.N. Islam, A.T. Haghghi, and S.M.T. Mustafa. 2022. The impact of land use and land cover change on groundwater recharge in northwestern Bangladesh. *Journal of Environmental Management*, 315 (69): 115130. doi: <https://doi.org/10.1016/j.jenvman.2022.115130>
3. Tulip, S.S., M.S. Siddik, M.N. Islam, A. **Rahman**, A.T. Haghghi, and S.M.T. Mustafa. 2022. The impact of irrigation return flow on seasonal groundwater recharge in northwestern Bangladesh. *Agricultural Water Management*, 266, p.107593. doi: <https://doi.org/10.1016/j.agwat.2022.107593>.

4. **Rahman, A.**, J. Fehrenbach, C. Ulven, S. Simsek, and K. Hossain. 2021. Utilization of wheat-bran cellulosic fibers as reinforcement in bio-based polypropylene composite. *Industrial Crops and Products* 172: 114028. doi: <https://doi.org/10.1016/j.indcrop.2021.114028>
5. **Rahman, A.** and M.A. Mojid. 2018. Climate change impact assessment on three major crops in the north-central region of Bangladesh using DSSAT. *International Journal of Agricultural and Biological Engineering* 11(4): 135-143. doi: 10.25165/j.ijabe.20181104.3331
6. **Rahman, A.**, M.S. Borhan, and S. Rahman. 2018. Evaluation of microbial fuel cell (MFC) for bioelectricity generation and pollutants removal from sugar beet processing wastewater (SBPW). *Water Science & Technology* 77(1-2):387-397. doi: 10.2166/wst.2017.549.
7. Banu, S., **A. Rahman**, and A.K.M. Adham. 2017. Assessment of the effect of climate change on vegetative growth of major crops in Bangladesh using DSSAT. *Fundamental and Applied Agriculture* 2(3): 317-325. doi: 10.5455/faa.278830
8. **Rahman, A.**, C. A. Ulven, M. A. Johnson, C. Durant, and K. G. Hossain. 2017. Pretreatment of wheat bran for suitable reinforcement in biocomposites. *Journal of Renewable Materials* 5(1): 62-73(12). DOI: <https://doi.org/10.7569/JRM.2017.634133>
9. Hafiz, N., S.M. Adity, S.F. Mitu, **A. Rahman**. 2016. Effect of manure types on phosphorus sorption characteristics of an agricultural soil in Bangladesh. *Cogent Food & Agriculture*, 2(1):1270160. doi: <https://doi.org/10.1080/23311932.2016.1270160>
10. Samad, M.A., M.R. Hoque, and **A. Rahman**. 2014. Development of an efficient operating pumping system for electrically operated pumping sets for minor irrigation. *Journal of Bangladesh Society for Agricultural Science and Technology*, 11 (1&2): 97-108.
11. **Rahman, A.**, S. Rahman, and L. Cihacek. 2014. Influence of soil pH in vegetative filter strips to reduce soluble nutrients transport. *Environmental Technology* 35 (14):1744-1752. doi: 10.1080/09593330.2014.881421
12. **Rahman, A.**, S. Rahman, and M.S. Borhan. 2013. Performance evaluation of three vegetative filter strip designs for controlling feedlot runoff pollution. *J. Civil and Environmental Eng.*, 3: 124. doi:10.4172/2165-784X.1000124.
13. Cemek, B., S. Rahman, and **A. Rahman**. 2012. Prediction of nutrients concentration in runoff from beef cattle feedlot using artificial neural network. *Environmental Engineering and Management Journal* 12(12): 2385-2396.
14. **Rahman, A.**, S. Rahman, and L. Cihacek. 2012. Efficacy of vegetative filter strips (VFS) installed at the edge of feedlot to minimize solids and nutrients from runoff. *Agric. Eng. Int: CIGR Journal*, 14(4): 9-21.
15. Hossain, I. and **A. Rahman**. 2008. Irrigation methods suitable for growing diversified crops in Mymensingh district. *Intl. J. BioRes.* 5(1): 35-42.

16. **Rahman, A.** and I. Hossain. 2008. Groundwater assessment in Niamotpur upazila under Naogaon district. *Bangladesh J. Prog. Sci. & Tech.* 6(1): 53-56.
17. Syfunnahar, N. Islam, and **A. Rahman.** 2007. A study on the performance of 'Pabna Irrigation and Rural Development Project'. *Bangladesh J. Agri. Engg.* 18(1&2):47-53.

#### **PhD Dissertation:**

**Rahman, A. 2013.** Vegetative filter strip (VFS): A best management practice for feedlot runoff pollution control in North Dakota, Unpublished Ph.D. dissertation, Dept. of Agricultural and Biosystems Engineering, ND State University, Fargo, ND.

#### **Conference Publications/Presentations:**

1. **Rahman, A.,** R. Awal, A. Fares, A. Veettil, B. Thapa, A. El Hassan, and N. Melaku. 2023. Nitrogen Status Measurement Using SPAD and NDVI in Sweet Corn Cropping Systems Fertilized with Different Manure Types and Biochar. Presented at the “2023 ASABE Annual International Meeting” in Omaha, Nebraska, United States, 9 – 12 July.
2. **Rahman, A.,** R. Awal, A. Fares, A. Veettil, B. Thapa, A. El Hassan, and N. Melaku. 2023. Predicting Chlorophyll Levels and Biomass Production Using Machine Learning and Statistical Approaches. Presented at the “2023 AI in Agriculture: Innovation and Discovery to Equitably meet Producer Needs and Perceptions” Conference in Orlando, Florida, United States, 17 – 19 April.
3. **Rahman, A.,** R. Awal, A. Fares, A. Veettil, N. Melaku, B. Thapa, and A. El Hassan. 2022. Climate-smart practices and fate of soil carbon under a sweet corn cropping system. Presented at the “2022 ASA-CSSA-SSSA International Annual Meeting” Baltimore, Maryland, United States, 6 – 9 November.
4. Melaku, N.D., R. Awal, A. Fares, A. Veettil, B. Thapa, **A. Rahman,** and Almoutaz El Hassan. 2022. Soil moisture dynamics in the selected climate-smart agricultural practices in sweet corn fields. Presented at the “2022 ASA-CSSA-SSSA International Annual Meeting” Baltimore, Maryland, United States, 6 – 9 November.
5. Thapa, B., A. Fares, R. Awal, A. El Hassan, A. Veettil, N. Melaku, and **A. Rahman.** 2022. Positive sweet corn growth response to selected climate-smart agriculture practices. Presented at the “2022 ASA-CSSA-SSSA International Annual Meeting” Baltimore, Maryland, United States, 6 – 9 November.
6. Fares, A., H.K. Bayabil, R. Awal, M. Zekri, R. Mohtar, and **A. Rahman.** 2022. Effects of climate change on citrus irrigation requirements in arid and semi-arid environments. Presented at the “Global Climate Change: Finding Ways to Save Our World” international virtual conference at the Center for Climate Change Research, Toronto, CA, 30 – 31 May.
7. **Rahman, A.,** R. Awal, A. Fares, A. Elhassan, and A. Veetil. 2022. Impact of Manure Types and Application Rates on Soil Physical Properties. Presented at the 20<sup>th</sup> Biennial Association of 1890 Research Directors (ARD) Research Symposium held in Atlanta, Georgia, 2 – 5 April.
8. Awal, R., A. Veetil, A. Elhassan, **A. Rahman,** and A. Fares. 2022. Examining the Relationship Between Organic Amendment Types and Rates, and SPAD and NDVI Readings Under Sweet



Corn. Presented at the “Envisioning 2050 in the Southeast: AI-Driven Innovations in Agriculture” conference at Auburn, Alabama, 9 – 11 March.

9. Awal, R., A. Fares, A. Veetil, A. Elhassan, and **A. Rahman**. 2021. Effect of Organic Amendment Types and Rates on Leaf Chlorophyll and NDVI of Sweet Corn. Presented at the ASA, CSSA, SSSA International Annual Meeting, Salt Lake City, Utah, 7 – 10 November.
10. **Rahman, A.** 2019. Water stress, water use efficiency and adaptation strategies for wheat cultivation in Bangladesh under climate change scenarios. Presented at the 4th International Conference on Climate Change (ICCC), Yogyakarta City, Indonesia 18-19 November.
11. **Rahman, A.**, M.A. Mojid, and I.A. Monika. Evaluation of CERES-Wheat model for wastewater irrigation and fertilizer interactions in wheat cultivation. Presented at the 2017 ASABE Annual International Meeting Sponsored by ASABE, Spokane, Washington, July 16-19. ASABE paper number 1701090. doi: 10.13031/aim.201701174
12. **Rahman, A.**, C.A. Ulven, C. Durant, M.A. Johnson, J. Fehrenbach, and K.G. Hossain. 2017. Selection, pretreatment, and use of wheat bran for making thermoplastic composite. Presented at the 2017 ASABE Annual International Meeting Sponsored by ASABE, Spokane, Washington, July 16-19. ASABE paper number 1701174. doi: 10.13031/aim.201701090
13. Johnson, M.A., **A. Rahman**, C. Ulven, and K.G. Hossain. 2017. Wheat Bran Fibers as Reinforcing Filler in Polypropylene Composite: Effect of Pretreatment and Fiber Loading Rates. Presented at ND EPSCoR 2017 State Conference, Fargodome, Fargo, ND, USA. April 12, 2017.
14. Durant, C., **A. Rahman**, C. Ulven, and K.G. Hossain. 2017. Pretreatment and Use of Wheat Bran for Reinforcement in Injection Molded Polypropylene Composites. Presented at ND EPSCoR 2017 State Conference, Fargodome, Fargo, ND, USA. April 12, 2017.
15. **Rahman, A.**, C. Ulven, and K.G. Hossain. Selection of Suitable Wheat Brans for Cellulosic Fibers for Making Thermoplastic Composites. 2016. Presented at ND EPSCoR/IDeA 2016 State Conference, Alerus Center, Grand Forks, ND, USA. April 19, 2016.
16. Johnson, M.A., **A. Rahman**, and K.G. Hossain. 2016. Pretreatment of Wheat Bran for Separating Cellulosic Fibers to Use in Thermoplastic Composites. Presented at ND EPSCoR/IDeA 2016 State Conference, Alerus Center, Grand Forks, ND, USA. April 19, 2016.
17. **Rahman, A.**, S. Rahman, and L. Cihacek. 2012. Effect of pH in vegetative filter strips in reducing manure borne soluble nutrients in runoff. Presented at the 2012 ASABE Annual International Meeting Sponsored by ASABE Dallas, Texas July 29 – August 1. ASABE paper number 121338100. doi: 10.13031/2013.42182
18. **Rahman, A.** 2013. Vegetative filter strips for controlling feedlot runoff pollution in North Dakota. Presented at the Water Quality Monitoring Council meeting and ND-WRRI Fellowship Research Presentations. February 7, 2013, North Dakota State University, Fargo, North Dakota.

19. **Rahman, A.** and S. Rahman. 2011. Efficacy of vegetative filter strips to minimize solids and nutrients from feedlot runoff. Presented at the 2011 ASABE Annual International Meeting, Sponsored by ASABE, Louisville, Kentucky, August 7-10.
20. Rahman, S. and **A. Rahman**. 2011. Efficacy of Vegetative Filter Strips to Minimize Solids and Nutrients from Feedlot Runoff. Presented at the Big Iron Farm Show, Fargo, North Dakota. September 13-15, 2011.

#### **Extension Publications:**

1. Rahman, S., T. Scherer, **A. Rahman**, and J. Lang. 2013. Water quality of runoff from beef cattle feedlots. NDSU Extension Publication No. WQ1667
2. Rahman, S., **A. Rahman**, and R. Wiederholt. 2011. Vegetative Filter Strips (VFS) to reduce runoff pollutants from feedlot. NDSU Extension Publication No. NM1591

#### **Factsheets**

1. **Atikur Rahman**, Ripendra Awal, Ali Fares, Anoop Veetil, Binita Thapa, Almoutaz Elhassan, and Nigus Melaku. A Quick on the field Chlorophyll and Nitrogen Level Determination.
2. **Atikur Rahman**, Ripendra Awal, Ali Fares, Anoop Veetil, Binita Thapa, Nigus Melaku, and Almoutaz Elhassan. Soil CO<sub>2</sub> Emission Monitoring.

#### **MS Thesis Supervised:**

1. Saha, T. R. 2022. Analyzing global warming-induced drought in selected hydrological zones of Bangladesh in the future climate change scenarios. MS thesis submitted to the Department of Irrigation and Water Management, Bangladesh Agricultural University, Mymensingh, Bangladesh.
2. Aktar, S. 2022. Investigating the quality of leachate from the double-cropping rice cultivation systems. MS thesis submitted to the Department of Irrigation and Water Management, Bangladesh Agricultural University, Mymensingh, Bangladesh.
3. Kumar, G. 2020. Estimation of irrigation water requirement of boro rice under climate change condition: an inter-model comparison study. MS thesis submitted to the Department of Irrigation and Water Management, Bangladesh Agricultural University, Mymensingh, Bangladesh.
4. Rokon, R. 2016. Estimation of solar irradiance of Mymensingh by using daily air temperatures. MS thesis submitted to the Department of Irrigation and Water Management, Bangladesh Agricultural University, Mymensingh, Bangladesh.
5. Akhter, I. 2016. Evaluation of CERES-Wheat model for wastewater irrigation and fertilizer interactions in wheat crop. MS thesis submitted to the Department of Irrigation and Water Management, Bangladesh Agricultural University, Mymensingh, Bangladesh.

6. Banu, S. 2016. Assessment of potential impacts of climate change on major crops at Mymensingh Bangladesh using DSSAT model. MS thesis submitted to the Department of Irrigation and Water Management, Bangladesh Agricultural University, Mymensingh, Bangladesh.

**Undergraduate Report Supervised:**

1. Das, R.S. 2020. Characterization of Phosphorus Sorption Behavior of a Wetland Peat Soil for Biosorbent Application. Undergraduate thesis report submitted to the Department of Irrigation and Water Management, Bangladesh Agricultural University, Mymensingh, Bangladesh.
2. Saha, T.R. And S. Aktar. 2019. Development of fertilizer management practices of wheat for optimum yield using CERES-wheat crop model in DSSAT. Undergraduate thesis report submitted to the Department of Irrigation and Water Management, Bangladesh Agricultural University, Mymensingh, Bangladesh.
3. Adity, S.M. and S.A. Sheli. 2015. Characterization of phosphorus sorption behavior of soil as treated with goat manure. Undergraduate thesis report submitted to the Department of Irrigation and Water Management, Bangladesh Agricultural University, Mymensingh, Bangladesh.
4. Hafiz, N. and S. Afrin. 2015. Characterization of soil phosphorus sorption behavior as treated with fresh dairy manure. Undergraduate thesis submitted to the Department of Irrigation and Water Management, Bangladesh Agricultural University, Mymensingh, Bangladesh.
5. Hakim, M.A. and B.N. Sarkar. 2015. Sorption of phosphorus from poultry manures by agricultural soil. Undergraduate thesis submitted to the Department of Irrigation and Water Management, Bangladesh Agricultural University, Mymensingh, Bangladesh.

**References:**

Available upon request.