

## Dr. Mohammad Abdul KADER

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### Field of specialization

*Irrigation and water management, soil hydrology, conservation agriculture*

### Education

Kyoto University, Japan	PhD	Agricultural science	2020	-
Gifu University, Japan	M.S.	Agriculture and Environmental Sciences	2016	3.91
Bangladesh Agricultural University	M.S.	Irrigation and Water Management	2013	3.61
Bangladesh Agricultural University	B.Sc.	Agricultural Engineering	2011	3.61
Govt Azizul Haque College, Bogura		Higher Secondary School Certificate	2006	5.00

### Present job status

**Deputy Director, Rural Development Academy (RDA), Bogra-5842, Bangladesh**

Ministry of Local Government, Rural Development & Co-operatives

Phone: +8805151001, Website: [www.rda.gov.bd](http://www.rda.gov.bd)

**Activities:** Research and training for rural development through water resources management

### Professional Experiences

Deputy Director	Rural Development Academy (RDA), Bangladesh	7/2019~
Assistant Director	Rural Development Academy (RDA), Bangladesh	2013~2019
Assistant Project Director	Action Research Project on "Construction of Co-operative based Multistoried 'Palli Janapad' Housing with Modern Urban Amenities for Livelihood Improvement of the Rural People.	2016-2017
Assistant Project Director	Establishment of Rural Development Academy at Jamalpur	2016 - 2017
Research Assistant	Laboratory of Water Resources Environment, Gifu University, Japan	2014 - 2016
Unit In-charge	Biogas, Irrigation and farm machinery unit at RDA, Bogura	2016 - 2017
Researcher	Hydrological Environment Engineering Laboratory, Kyoto University, Japan	2017-2020

### Scholarship and Awards

1. Water and Environmental leadership scholarship from River Basin Research Center, Gifu University	2014
2. The Kubota Fund scholarship awarded by Kubota International Scholarship Foundation, Japan	2015
3. The Kubota Fund scholarship awarded by Kubota International Scholarship Foundation, Japan	2016
4. Japanese Government (MEXT) Scholarship for doctoral program at Kyoto University, Japan	2017
5. Indian Technical & Economic Cooperation Programme (ITEC) fellowship for a short course training program at NIRD, India	2017

### Professional memberships

- American Society of Agricultural and Biological Engineers (ASABE); Membership No: 1052046
- International Soil Tillage Research Organization (ISTRO). Certificate No. 993
- Institute of Engineers Bangladesh (IEB)
- Krishibid Institution of Bangladesh (KIB)

### International training

- Participated an International training program on Planning and management of sustainable housing and habitat development at the National Institute of Rural Development (NIRD), Hyderabad, India from 01-08-2017 to 28-08-2017.
- Participated a conference of 21<sup>st</sup> International Soil Tillage Research Organization (ISTRO) in Paris France from 24- 27 September 2018.

### Training and certificate received

- Participated Public Service Innovations training during 23-27 April, 2017 offered by Rural Development and Cooperative Division of the Ministry of Local Government, Rural Development & Co-operatives, Bangladesh.
- Successfully completed training course on "Preparation of Reports and Writing Ups" during 06-10 November 2016 from Bangladesh Society for Training and Development (BSTD), Dhaka, Bangladesh.
- Participated 45th special foundation training course for 2 months (10 February -10 April 2014) from Rural Development Academy (RDA), Bogra, Bangladesh.
- Successfully completed six months training course on "Basics of MS Office" from Department of Social Services Ministry of Social Welfare Urban Community Development Project, Bogra, Bangladesh.
- Successfully completed the course on "Data Analysis: MSTATC and SPSS" from Graduate Training Institute (GTI), Bangladesh Agricultural University, Mymensingh.

### Conference Presentations

- Mulches effects on soil water environments under effective rainfall on soybean (Glycine max). 4<sup>th</sup> UGSAS-GU International Symposium 2015 in Gifu University, Japan.
- Effects of plastic-hole mulching on effective rainfall and readily available soil moisture under soybean (Glycine max) cultivation. 5<sup>th</sup> UGSAS-GU International Symposium 2016 in Gifu University, Japan.
- Modelling effects of straw mulching on soil water and temperature regimes in rain-fed soybean field of central Japan. 21<sup>st</sup> ISTRO conferences 2018 in Paris, France.
- Modeling of water and heat flow in mulched soil under rain-fed soybean cultivation. 68<sup>th</sup> Japanese Society of Irrigation, Drainage and Rural Engineering (JSIDRE) conference during 4-6 September 2019 at the Tokyo University of Agriculture and Technology, Japan.
- Leaf water potential estimation of mandarin orange tree based on multiple regression and soil-plant-atmosphere continuum models. 2019 Seoul INWEPF & PAWEES International Conference during 5-7 November 2019 at InterContinental Seoul COEX, South Korea.

### Internship

- Successfully completed the internship on Japanese waste water treatment technology from Gifu prefectural environmental management and technology center, Japan during 7-11 September, 2015.

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**Thesis**


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Undergraduate	Hydrophobic effects of oily water on some soil properties.
Masters 1	Climate change and its impacts on actual crop evapotranspiration of boro rice in north-west hydrological region of Bangladesh.
Masters 2	Mulching material effects on soil moisture and temperature of soybean ( <i>Glycine max</i> ) under effective rainfall.
Doctor	Effectiveness of various types of mulching on soil moisture and temperature regimes under rainfed soybean cultivation.

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**List of Publications**

1. **Kader M. A.**, Nakamura K., Senge M., Mojid M. A., and Kawashima S. (2020). Effects of coloured plastic mulch on soil hydrothermal characteristics, growth and water productivity of rainfed soybean. *Irrigation and Drainage*. doi: <https://doi.org/10.1002/ird.2431>.
2. **Kader Mohammad Abdul**, Ashutus Singha, Mili Amena Begum, Arif Jewel, Ferdous Hossain Khan, Nazrul Islam Khan (2019). Mulching as water-saving technique in dryland agriculture: review article. *Bulletin of the National Research Centre*, 43, 148. (doi.org/10.1186/s42269-019-0186-7).
3. **Kader, M.A.**, Nakamura, K., Senge, M., Mojid, M.A., and Kawashima S. (2019). Soil hydro-thermal regimes and water use efficiency of rain-fed soybean (*Glycine max*) as affected by organic mulches. *Agriculture Water Management*, 223, 88-98. (doi.org/10.1016/j.agwat.2019.105707).
4. **Kader, M.A.**, Nakamura, K., Senge, M., Mojid, M.A., and Kawashima S. (2019). Numerical simulation of water- and heat-flow regimes of mulched soil in rain-fed soybean field in central Japan. *Soil and Tillage Research*, 191, 142-155. (doi.org/10.1016/j.still.2019.04.006).
5. **Kader, M. A.**, Senge, M., Mojid, M. A., & Ito, K. (2017). Recent advances in mulching materials and methods for modifying soil environment. *Soil and Tillage Research*, 168, 155–166. (doi.org/10.1016/j.still.2017.01.001)
6. **Kader, M. A.**, Senge, M., Mojid, M. A., Ito, K. & T. Onishi (2017). Effects of plastic-hole mulching on effective rainfall and readily available soil moisture under soybean (*Glycine max*) cultivation. *Journal of paddy and water environment*, 15 (3), 659-668. (doi: 10.1007/s10333-017-0585-z).
7. **Kader, M. A.**, Senge, M., Mojid M.A. and Nakamura, K. (2017). Mulching type-induced soil moisture and temperature regimes and water use efficiency of soybean under rain-fed condition in central Japan. *International Soil and Water Conservation Research*. (doi.org/10.1016/j.iswcr.2017.08.001)
8. **Kader, M. A.**, Karim N. N & Mojid M. A. (2014). Impact of climate change on actual crop evapotranspiration of boro rice in Rajshahi division. *Journal of Agricultural Engineering-* 41 (2), 24-33.
9. **Kader, M. A.**, Karim N. N & Mojid M. A. (2016). Climate change impacts on crop evapotranspiration of boro rice in Rangpur division of Bangladesh. *Bangladesh Journal of Agriculture*, 38-40 (5), 17-29
10. **Kader M.A.** & Rannu R. P. (2015). Hydrophobic effects of oily water on some soil properties. *Bangladesh Rural Development Studies* 17 (1), 89-100.
11. Islam, M.T. & **Kader M. A** (2015). Choice of efficient centrifugal pump for minor irrigation scheme. *International Journal of Multidisciplinary Research and Development* 2 (4), 19-23.
12. Sinha, S. R., Singha, A., Faruquee, M., Jiku, M. A. S., Rahaman, M. A., Alam, M. A., & **Kader, M. A.**

(2019). Post-harvest assessment of fruit quality and shelf life of two elite tomato varieties cultivated in Bangladesh. *Bulletin of the National Research Centre*, 43(1), 185. <https://doi.org/10.1186/s42269-019-0232-5>.

13. Tabriz, S.S, **Kader, M.A** and et al. (2020). Prospects and challenges of conservation agriculture in Bangladesh for sustainable sugarcane cultivation. *Environment, Development and Sustainability* (revised submitted).

#### Upcoming publications

- RDA-developed cost-effective borehole technology for utilizing ground water resources in rural Bangladesh. *Hydrological Research Letter* (Under review).
- Two-dimensional numerical simulations of soil-water and heat flow in a rainfed soybean field under plastic-hole mulching. (Revision submitted to *Biosystem Engineering* journal).
- Soil water consumption and leaf water potential as affected by mulch-drip irrigation system for producing high-quality mandarin orange (*Citrus unshiu*) in Wakayama Prefecture of Japan (editing).
- Soil thermal environments as affected by plastic mulching in an orange tree (editing).

#### Book Chapter

- Mojid, M. A., **Kader, M. A.**, Karim, N.N., (2016). Impact of climatic variation on reference crop evapotranspiration in the north-east hydrological region of Bangladesh. *Advances in Environmental Research*. Nova Science Publishers, Inc., 25 (2): 51-74.

#### Reviewed peer-review journals

- Outstanding reviewer award from *Agricultural and Forest Meteorology* journal, Netherland
- *International Journal of Soil and Tillage Research*, Netherland
- *International Journal of Agricultural Water Management*, Netherland
- *Irrigation science*
- *Geoderma*
- *Biosystem Engineering*
- *Archives of Agronomy and Soil Science*

