

## Debjit Roy

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## Research Interest

Soil and Water system, Infiltration, Agricultural Irrigation and Drainage, Water Resources and Management, Water Modeling and Simulation

## Education Qualification

Degree	University	Year
Ph.D. Agricultural and Biosystems Engineering	North Dakota State University	2017 (Expected)
M.Sc. Engg. Water Resources	Bangladesh University of Engineering and Technology	2008
B.Sc. Agri. Engg.	Bangladesh Agricultural University	2002

## Publications

### Research Articles:

1. **Roy, Debjit** and Sattar, M. A. 2009. Promoting alternate wetting and drying (AWD) method in selected locations at Sadar upazilla of Kushtia. *Journal of Agricultural Engineering (IEB)*. 37/AE: 39-48.
2. **Roy, D.** and Hassan, M. N. 2009. Adoption of water management technologies to increase water productivity for rice cultivation in climate change situation at Sadar upazila of Khustia. *Bangladesh J. Agri. Engg.* 20 (1&2): 41-51.
3. **Roy, Debjit**, Akand, S. K., Rahman, S. and Nath, B. C. 2009. Development of building blocks using local sands. *Bangladesh J. of Prog. Sci. & Tech.* 7(2):183-186.
4. **Roy, Debjit** and Matin, M. Abdul. 2009. Experimental study on local scour around pier-like structures at floodplain of compound channel. *Bangladesh J. of Water Resources Research.* 21: 1-16.
5. **Roy, Debjit**, Islam, M. T. and Nath, B. C. 2010. Impact of supplemental irrigation applied at different growth stages of transplanted Aman rice (*Oryza sativa*). *The Agriculturist.* 8(1): 109-114.
6. **Roy, Debjit** and Matin, M. Abdul. 2010. An assessment of local scour at floodplain and main channel of compound channel section. *Journal of Civil Engineering (IEB)*. 38(1): 39-52
7. **Roy, D.**, M.U. Ahmmmed and N.H. Mahmud. 2014. Water management technologies for sustainable rice cultivation under changing climate. *Journal of Agricultural Engineering (IEB)*. 41/AE (1):43-52

8. Rahman, S., Rahman, M., Talukdar, M. S. U., **Roy, Debjit** and Raihan, A. T. M. Z. 2009. Evaluation and comparison of conveyance losses through earthen channel under different conditions. *Intl. J. of BioRes.* 8(1): 11-16.
9. Rahman, S., Khair, M. A. and **Roy, Debjit**. 2009. Performance test of different manually operated pumping devices used for low-lift irrigation. *Eco-Friendly Agril. J.* 2(12):982-985.
10. Hossain, M. O., Satter, M. A., **Roy, Debjit** and Nath, B. C. 2009. Performance evaluation of a small diesel engine by hydraulic dynamometer. *Bangladesh J. Prog. Sci. & Tech.* 7(2):191-194.
11. Nath, B. C., Hossen, M. A., **Roy, Debjit** and Rahman, M. A. 2009. Design and construction of microlysimeters to determine evapotranspiration of rice. *Journal of Agricultural Engineering (IEB).* 36/AE: 37-43.
12. Hossain, M. O., Satter, M. A., Nath, B. C. and **Roy, Debjit**. 2008. Test performance of diesel engine suitable for multipurpose use as prime movers in Bangladesh. *J. Sci. Technol. (Dinajpur).* 6: 67-74
13. Nath, B. C., Satter, M. A., Ahmed, M. T., **Roy, Debjit** and Islam, A. K. M. Saiful. 2009. Performances of direct and standard cooling systems for small engine used in irrigation. *Bangladesh Rice J.* 14(1&2): 161-167.
14. Saha, R. C., Vhutto, M. Z. A., Islam, M. M., Nath, B. C. and **Roy, Debjit**. 2010. Performance study of an engine operated mechanical chopper. *Bangladesh J. Prog. Sci. & Tech.* 8(1): 79-82.
15. Alam, Bodrul, **Roy, Debjit** and Nath, B. C. 2010. Effect of different levels of drip irrigation and mulching on yield of Tomato (*Lycopersicon esculentum* mill.). *Bangladesh J. Prog. Sci. & Tech.* 8(2): 263-266.
16. Begum, Shahinara, Akhand, Shoukat Ali and **Roy, Debjit**. 2010. Contamination of agricultural land by Arsenic from irrigated water. *Journal of Agricultural Engineering (IEB).* 38/AE (2):29-38.
17. Ahmmed, M.U., S. Hossain, **D. Roy** and K.F. Ahmed. 2011. Performance evaluation of a Deep tube-well at Sutiakhali in Mymensingh Sadar Upazilla. *Journal of Agricultural Engineering (IEB).* 39/AE (1): 53-59
18. Ahmmed, M.U., D. Roy and N.H. Mahmud. 2014 Feasibility study of a rice transplanter in mechanized agriculture by analyzing operation cost and performance evaluation. *Journal of Agricultural Engineering (IEB).* 41/AE (1): 29-36

*Proceedings and Oral Presentations:*

1. **Roy, D.** and Matin, M. A. 2010. An experimental assessment of local scour at floodplain and main channel of compound section. *In Proceedings of IABSE-JSCE joint international conference on Advances in Bridge Engineering-II* (Eds: Amin A. F. M., Okui, Y. and Bhuiyan, M. A. R.), 8-10 August, Dhaka, Bangladesh: 408-416.
2. Sattar, M. A., Rashid, M. A., Hassan, M. N., Molla, H. R., Khan, A. K., Parveen, S., **Roy, D.** and Mahamud, H. 2009. AWD technology for water saving in boro rice production for the selected locations. *In proceedings of National Workshop on AWD Technology for Rice Production in Bangladesh* (Eds. Sattar, M. A., Maniruzzaman, M. and Kashem, M. A.). 15 July, BRRI, Gazipur, Bangladesh: 1-14.

3. **Roy, D.** 2010. Dissemination of water management technologies for rice cultivation to ensure food security in changing climatic situation. *Paper presented in Biennial conference on food security in Bangladesh: Challenges for extension services*, Bangladesh Agricultural Extension Society (BAES), Bangladesh Agricultural University, 23-24 December: 17
4. **Roy, D., X. Jia, D. Steele and X. Chu.** 2015. Measurement and simulation of infiltration rates into undrained and subsurface drained soils. ASABE Paper No. 152190011. St. Joseph, Mich.: ASABE.
5. Jia, X., J. Ransom, and **D. Roy.** 2014. Prediction of phenological development and maturity of two corn hybrids in eastern North Dakota. ASABE Paper No. 141913820. St. Joseph, Mich.: ASABE.
6. **Roy, D., X. Jia, D. Steele and X. Chu.** 2015. Measurement and simulation of infiltration rates into undrained and subsurface drained soils. 2015 ASABE Annual International Meeting, 26-29 July, 2015, New Orleans, Louisiana, USA
7. **Roy, D., X. Jia and D.D. Steele.** 2015. HYDRUS model simulation of infiltration rates into undrained and tile drained soils. North Central ASABE Conference, 10-11 April, 2015, Fargo, North Dakota, USA
8. **Roy, D., X. Jia, D. Steele and T. DeSutter.** 2014. Soil water release curve development by field and laboratory setups. ASABE Intersectional Meeting, 28-29 March 2015, Brookings, South Dakota, USA
9. Jia X., J. Ransom and **D. Roy.** 2014. Prediction of phonological development and maturity of two corn hybrids in eastern North Dakota. 2014 ASABE Annual International Meeting, 12-16 July, 2014, Montreal, Quebec, Canada.

### Trainings

Course Title	Institution	Year
Shot course on 'On Farm Water Management'	Bangladesh Rural Development Academy	2004
Water management for rice cultivation	Irrigation Extension Training Center, Bangladesh Water Development Board	2008
Hybrid rice development and seed production	Bangladesh Rice Research Institute	2008
Breeder seed production and preservation of rice	Bangladesh Rice Research Institute	2008
IWRM Practices: Global and Bangladesh Perspective	Centre for Environment and Geographic Information Services (CEGIS), Global Water Partnership (GWP) and Uttaran	2009
One month rice production training	Bangladesh Rice Research Institute	2010
Agricultural Engineering Technology	Bangladesh Agricultural Research Institute	2011
Capacity Development for Farm Management Strategies to improve Crop-Water Productivity using <b>AquaCrop</b> Model	Food and Agriculture Organization (FAO)-Norwegian Embassy- Centre for Environment and Geographic Information Services (CEGIS)-Bioforsk-BRRI	2012

## **Workshops and Meetings**

1. National workshop on *Agricultural Engineering Research Planning*, 29 June 2009, BARC, Dhaka
2. National workshop on *Adoption and Success of Alternate Wetting and Drying (AWD) Technology for Rice Production*, 15 July 2009, BRRI, Gazipur
3. *Yong Scientist Congress 2009*, 29-30 December 2009, Bangladesh Academy of Sciences, Dhaka
4. Workshop on *Impact Pathways of AWD Dissemination and visions for up scaling AWD in Bangladesh*, 5 August 2010, IRRI, Dhaka
5. Workshop on *Scientific Documentation for Breeder Seed Production*, 09-11 January 2011, BRRI, Gazipur
6. National workshop on *Agricultural Engineering Research Planning*, 23-24 May 2011, BARC, Dhaka
7. Training workshop on *Water security and climate change*, 20-22 September 2011, Bangladesh Center for Advanced Studies, Dhaka
8. International workshop on *Alternate wetting and drying for resource conservation and reduction of environmental pollution*, 13-14 December 2011, IRRI, Dhaka
9. *STRASA Annual Planning Workshop for Phase 2*, 16-17 April 2012, IRRI, Dhaka
10. National workshop on *Agricultural Engineering Research Planning*, 11-12 June 2012, BARC, Dhaka
11. *Program Planning Workshop of Integrated Agricultural Productivity Project (IAPP)*, 2 January 2012, BRRI, Gazipur
12. *Planning Workshop*, Mujibnagar Integrated Agricultural Development Project, 19 April 2012, BRRI, Gazipur
13. *Regional Workshop of Integrated Agricultural Productivity Project (IAPP)-BRRI Component*, 19 July 2012, BRRI Regional Station, Barisal

## **Technology transfer/Dissemination Project Experience**

1. Government of Bangladesh (GoB) funded "Alternate Wetting and Drying Program"
2. Bangladesh Agricultural Research Council (BARC) funded "Dissemination of Water Management Technology Project"
3. Krishi Gobeshona Foundation (KGF) funded "Validation, Refinement and Dissemination of Improved Water Management Technologies for Increasing Water Use Efficiency and Rice Production"
4. Integrated Agricultural Productivity Project (IAPP), BRRI component
5. Mujibnagar Integrated Agricultural Development Project (MIADP)

## **Professional Organization Membership**

1. Institution of Engineers, Bangladesh (**IEB**); Membership no: M 23475
2. Bangladesh Society of Agricultural Engineers (**BSAE**); Membership no: M 582
3. Krishibid Institution of Bangladesh (**KIB**); Membership no: 05-02-17096
4. American Society of Agricultural and Biosystems Engineering (**ASABE**); Membership no: M1046972

Debjit Roy  
25<sup>th</sup> January 2016