



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES



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Rafiq Islam

Soil, Water, and Bioenergy Resources

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Curriculum Vita

SPECIALIZATION AND AREAS OF INTEREST

- Climate-smart agriculture and agroecosystem services
- Organic farming of high-value crops
- Carbon sequestration, tillage, and cover crops
- Soil health and water management
- Marginal soil and biomaterial production
- Plant inducing for abiotic- & biocontrol services

EDUCATION

- Ph.D. in Soil & Environmental Quality, University of Maryland, USA.
- M.S. in Soil & Water Engineering, Asian Institute of Technology, Thailand.
- B.S. in Soil and Environmental Sciences, Dhaka University, Bangladesh.

CURRENT PROFESSIONAL EXPERIENCE

2002 – Present: Director, Soil, Water, and Bioenergy Resources, Ohio State University South Centers/SENR, Columbus, Ohio State University.

- Teach undergraduate- and graduate courses, including Soil and Environmental Sciences and Field Investigation of Soil: Sampling and Multivariate Statistics.
- Served as a graduate student supervisor and committee member. Conduct research on climate-smart agriculture. Write proposals for extra-mural funding to conduct applied and basic research. Published articles in peer-reviewed journals.

PREVIOUS PROFESSIONAL EXPERIENCE

2014 – 2015: Fulbright Teaching Fellow, Dept. of Soil Science and Plant Nutrition, Cukurova University, Adana, Turkey.

1997 – 2001: Instructor/Faculty Research Associate, Natural Resource Sciences & Landscape Architecture, University of Maryland at College Park, MD.

2000 - 2001: Training Coordinator, Civic Works (A non-profit organization affiliated with

- AmeriCorps), Baltimore, MD.
- 1999 – 2001: Core Faculty, Sojourner-Douglass College, Baltimore, MD.
- 1994 – 1996: Graduate Research Assistant, Natural Resource Sciences & Landscape Architecture, University of Maryland at College Park, MD.
- 1991 – 1994: Graduate Teaching Assistant, Natural Resource Sciences & Landscape Architecture/Dept. Chemistry & Biochemistry, Univ. of Maryland.
- Prepared and delivered class lectures; provided tutoring; organized weekly discussion; prepared chemicals lab experiments, grade home-works, exams, and lab reports. Led field trip and assisted students to develop land-use projects.
- 1988 – 1992: Assistant Professor, Dept. Soil, Water and Environmental Sciences, Dhaka University, Dhaka, Bangladesh
- Taught undergraduate- and graduate courses, including Fundamentals of Soil and Environmental Sciences, Soil Fertility & Plant Nutrition, and Introductory Statistics and Field-Plot Techniques.
 - Served as a graduate student supervisor. Led field trip to identify fertility problems and evaluate land use/land cover effects on soil and water quality. Conducted research on soil fertility management. Wrote proposals for extra-mural funding to conduct research. Published articles in peer-reviewed journals.

ACADEMIC AND TEACHING SERVICE

Course development and teaching

- Graduate course development: Soil Research Methodology and Interpretation. For Dept. of Soil Science & Plant Nutrition, Cukurova University, Adana, Turkey. 2014-2015.
- Undergraduate course development: Soils in Our Environment. For Dept. of Soil Science and Plant Nutrition, Cukurova University, Adana, Turkey. 2014-2015.
- SENR 720: Field Investigation of Soil: Sampling and Multivariate Statistics. School of Environment and Natural Resources, Ohio State University. 2008–present. Course developed by Professor Warren Dick and Rafiq Islam.
- Soil Science Course: 694: Analysis and Interpretation of Soil Organic Matter. School of Environment and Natural Resources, Ohio State University. 2004–present. Course developed by Rafiq Islam.
- Soil Science Course 101: Soils and Our Environment. For School of Environment and Natural Resources, Ohio State University. 2006–2007. Course developed by Professor Frank Calhoun, Brain Lowery and Rafiq Islam.

Graduate thesis/dissertation supervision (U.S.)

- Pattadar, S.N. (2019-present), Ph.D., School of Environment and Natural Resources, The Ohio State University, Supervisor.
- Natalia Zappernick (2019-2020) M.S., Department of Food, Agricultural, and Biological Engineering, The Ohio State University, Co-supervisor/Committee member.
- Vu T. Tran (2017): Examining adultism in higher education: A three-study dissertation. Ph.D. thesis, Educational Studies, The Ohio State University. Committee member.
- Saba Banish (2017): Electricity generation with simultaneous bio-treatment of landfill leachate wastewater using corn stover in microbial fuel cell technology. Ph.D. thesis Food, Agric & Biol Sci. Dept., Ohio State University. Committee member.

- Oliver H. Wigmore (2016) Assessing spatiotemporal variability in glacial watershed hydrology: Integrating unmanned aerial vehicles and field hydrology, Cordillera Blanca, Peru. Ph.D. thesis, Geography Dept., The Ohio State University. Committee member.
- Vinayak Shedekar (2016) Modeling Drainmode to evaluate soil drainage. Ph.D. thesis, Food, Agric & Biological Sciences, The Ohio State University. Committee member.
- Kuhuk Sharma (2014) Using ecological design to avoid and mitigate contaminant and pesticide risks of urban agriculture & enhance self-reliance of post-industrial cities. Ph.D. thesis, Environmental Science-Ohio State University. Committee member.
- Lindsey Kilpatrick (2012): Growing giant Miscanthus on marginal land for sustainable energy feedstock production and enhanced ecosystem services. M.S., Food, Agricultural & Biological Engineering, The Ohio State University. Supervisor.
- Silvia Mestelan (2008): Soil and plant – mediated processes and tillage effect on soil nutrient dynamics: a comparative study for agroecosystems in Ohio. Ph.D. thesis, SENR, The Ohio State University. Committee member.
- Hayden, E. (2006): Effects of organic versus conventional farming methods on physical and chemical soil quality indicators. MS. Thesis, School of Environment and Natural Resources, The Ohio State University. Committee member.

International student's supervision (graduate research)

- Emmanuel Amoakwah (2016-2017) Central Soil Testing Laboratory, Kumasi, Ghana. USDA Borlaug LEAP Ph.D. Scholar. Dissertation title: Effects of corn cob biochar on the physical, chemical, and biological properties of a weathered tropical soil. US-supervisor.
- HEBA Said Ali El Desouky El Abd (2015-2017) Assistant Lecturer, Botany Department, Faculty of Agriculture, Benha University, Egypt. Exchange student (Ph.D.). Dissertation title: Plants response to nano- and chelated nutrients. US-supervisor.
- Muhammad Rafi Qamar Hashmi (2012-2013) Dept. of Agronomy, Faisalabad Agricultural University, Pakistan. Dissertation title: Tillage and nitrogen effects on soil quality under irrigated wheat. US-mentor.
- Irfan Aziz (2008-2010) PM University of Arid Agriculture, Pakistan. Dissertation: Tillage and crop rotation impact on soil C sequestration under rainfed crop production. US-supervisor.
- Mohammed Mubashir (2009-2009) Bahauddin Zakaria University, Multan, Pakistan. Dissertation title: Nitrate pollution in vegetable-soil-water ecosystems. US-mentor.
- Niaz Ahmed (2008-2009). Bahauddin Zakaria University, Pakistan. Dissertation title: Establishment of soil and plant tissue B and Zn requirement in calcareous soil. US-mentor.
- Akram A. Ali. (1996-1999) Zagazig University, Egypt. Dissertation title: Influence of atmospheric CO₂, O₃ and moisture regime on photosynthesis, partitioning, and translocation of carbohydrates in plants, and soil C sequestration in agroecosystems. US-mentor.

EXTRAMURAL GRANT FUNDING (A total of more than \$ 6.1 millions)

Currently funded

- Islam K. R.**, Brad Bergefurd, and Matt Smith (2018-2022) Role of Water Quality and Soil Health in Sustainable Food Production on Urban Landscapes. USDA-Capacity Building. \$ 292,000.
- Islam**, K.R. and M.A. Rahman (2020) Integrated no-till cropping diversity to control topsoil and nutrient loss. \$ 5,000. Warner Endowment.
- Islam K.R.**, Shauna, B., Brad Bergefurd, Ajay Shah, and Peter Ling (2016 to 2022) Evaluation of Mitsui Chemicals iCAST Crop Cultivation System in Specialty Crop Production. Mitsui Corporation, Japan, \$ 650,000.
- Bergefurd, B. and **K.R. Islam** (2019-2022) Salicylic acid and nano Fe fertilization effects on economic production of pumpkin and tomatoes. Ohio Produce Growers & Marketers Association. \$ 9,000.

Pending funding

- Islam**, KR and Yaroslava, VP (2021-2022) Recycling municipal biosolids to improve marginal land quality for economically viable and environmentally compatible bioenergy feedstock production in Ukraine. CRDF-Global, \$74,000.
- Islam**, K.R., Bergefurd, B., and M.A. Rahman (2021-2023) Aquaponic Outlook: Enhancing the knowledge and success of aquaponics via promotion and growth of educational opportunities, integrated curriculums, and community outreach. NCR-SARE, \$ 100,000.
- Islam**, K.R. and M.A. Rahman (2020-2022) Developing Al-Fe/LDH Intercalated Activated Carbon Composite to Control Edge-of-Field Phosphorous and Nitrogen Loss. OSU internal grant, \$ 50,000.

Funded and completed

- Islam, K.R.** and N. Didenko (2017-2019) Impact of sustainable agricultural management practices on soil quality and crop productivity. CRDF grant \$ 107,000.
- Sundermeier, A., S.M. Shedekar, and **K.R. Islam** (2018-2019) Making sense of Soil Health Reports – A partnership to develop recommendations for soil health testing, interpretation. NCR-SARE Partnership grant, \$ 29,980.
- Islam, K.R.**, Gourapura, R., and I. Beau (2018) Strengthening U.S. and Kazakh Scientific Capacity through Joint-Institutional Agricultural Teaching, Research, and Outreach Development. January 2019 – September 2019. \$ 25,035. American Councils for International Education.
- Islam, K.R.** and Mavis Numafo (2018) Training professionals and educators on sustainable agriculture and soil health. Mandela Washington Fellowship Reciprocal Exchange grant. \$ 5,000.
- Islam, K.R.** (2018) Gypsum and cover crops effect on edge-of-field P loss study. CTC Mini-grant, \$ 3,000.
- Islam, K.R.** (2017) Improve efficiency and profitability of fertilizer use within the framework of Integrated Soil Fertility Management practices for smallholder farmers. USDA-FAS Norman Borlaug Fellowship Program. \$ 34,176.
- Islam, K.R.** (2017) U.S.-China Scientific Cooperative Exchange Program in Crop Rotation and Soil Quality Monitoring and Detection. \$ 39,002.
- Islam, K.R.** (2016-2017) Biochar impact on C and N concentrations, soil quality, crop yield and greenhouse gas emissions. University of California-Davis (Borlaug), \$ 18,914.

Islam, K.R. (2015-18) Recycle nitrogen to maximize no-till corn-soybean sustainability with winter-hardy clover blends. Grassland Oregon Assoc., \$ 30,000.

Islam, K.R. and Randall Reeder (2014-2017) Developing a farmer friendly soil organic matter calculator for sustainable production of soybeans with enhanced ecosystem services. Ohio Soybean Council. \$ 125,000

Islam, K.R. and Randall Reeder (2014-17) Maximize continuous no-till sustainability with cover crop blends and zeolite. Warner Endowment. \$ 15,000

Islam, K.R. and Jon Witter (2014-2017) Developing soluble reactive P & N adsorption materials from agricultural waste and natural products. Ohio Sea Grant. \$ 10,000

Islam, K.R. (2016) Influence of irrigation on soil fertility and structure (Soil quality). USDA-FAS Norman Borlaug Fellowship Program. \$ 32,276.

Fausey, N., **Islam, KR**, Warren Dick, Tara VanToai, Randall Reeder, Marvin Batte, and Dexter Watts (2011 to 2016) Increasing Soybean Productivity while Improving Soil Quality and Mitigating Climate Change. United soybean Board. \$ 1,000,000.

Witter, J., Koontz, T., **Islam, KR.**, and P. Mauser (2012 to 2017) An integrated approach to foster science-based management of agricultural drainage channels in the western Lake Erie basin. USDA-Integrated Water Quality. \$750,000.

Grewal, P., **Islam, K.R.**, McCoy, E.D. Kumarappan S., and A.P. Sundermeier (2012 to 2017) Impact of long-term and transitioning organic farming systems on soil ecosystem services: On farm & experimental assessment. USDA Organic Transition, \$ 750,000.

Islam, K.R. and Jon Witter (2014-2016) Developing soluble reactive phosphorus and nitrogen adsorption materials from agricultural waste and natural products? Ohio Sea Grant College Program, \$ 10,000.

Islam, K.R. and Jon Witter (2014) Studies on the performance of organically based phosphorus adsorption materials. Battelle Memorial Trust. \$ 25,000.

Islam, K.R., Cornish, K., Reeder, R., Sundermeier, A.P., Romich, E., Pennington, D., and Momen, B. (2014-2015) Training Professionals on Sustainable Advanced Energy Feedstock Production for Enhanced Ecosystems Services from the Ground Up. NE SunGrant Initiatives (DOE/USDA), \$ 30,000.

Islam, K.R. (2015) Ohio Agricultural Research and Development Center's equipment grant. Ohio State University, \$ 40,000.

Islam, K.R. (2013) Developing Management Tools for Assessing Greenhouse Gas Emissions and Carbon Sequestration in Agroecosystems. Norman Borlaug International Agricultural Science and Technology Fellowship Program. \$ 32,016.

Islam, K.R. and R.C. Reeder (2010 to 2013) Growing perennial grasses for biofuels on marginal land amended with municipal waste biosolids and flue gas desulfurization gypsum. Northeast SunGrant Competitive Funding. \$187,873.

Islam, K.R., R.C., Reeder, and J. Hoorman (2010 to 2013) Training Professionals on Sustainable Agriculture for Enhanced Ecosystems Services from the Ground Up. North Central Region SARE Professional Development Project, \$ 68,141.

Islam, K.R. and R. C. Reeder (2012-2013) Developing farmer friendly tools for predicting soil organic matter in a sustainable corn-based bioenergy feedstock system. Michigan Corn Growers Association. \$30,000.

Islam, K.R. (2012) Ohio Agricultural Research and Development Center's equipment grant. Ohio State University, \$ 60,000.

- Islam, K.R.** (2011 to 2013) Continuous No-Till and Cover Crops Effect on Reactive Nitrogen and Phosphorus Leaching from Manure Applied Fields under Corn-Soybean Rotation. Conservation Tillage and Technology Conference. \$ 9,000.
- Islam, K.R. (2011)** Effects of Organo-zeolitic mixtures to nutrient-use efficiency of crops for sustainable agriculture. Norman Borlaug International Agricultural Science and Technology Fellowship Program. \$ 33,060.
- Islam, K.R.** (2010) Carbon-Neutral Perennial Grass Biofuels from Biosolids and FGD Gypsum Amended Degraded Forest and Marginal Lands in Appalachian Ohio. Warner Endowment. \$5,000.
- Islam, K.R.** (2010) Ohio Agricultural Research and Development Center's equipment grant. Ohio State University, \$ 6,000.
- Islam, K.R.** (2008) Using Cover Crops to Improve Crop Water-use Efficiency. Conservation Tillage and Technology Conference Research Grant. \$2,000.
- Islam, K.R.** (2009) Ohio Agricultural Research and Development Center's equipment grant. Ohio State University, \$ 26,000.
- Islam, K.R.** (2007) Impact of Conventional and No-till Corn-Soybean Rotations with and Without Cover crops on Carbon Sequestration and Soil Quality. Conservation Tillage and Technology Conference Research Grant, \$5,000.
- Islam, K.R.** (2007) Ohio Agricultural Research and Development Center's equipment grant. Ohio State University, \$65,000.
- Islam, K.R.** (2006) Cover Cropping to Enhance NT Soil Quality for Economic Crop Production. CTTC Research Grant, \$2,000.
- Islam, K.R.** (2006) Ohio Agricultural Research and Development Center's equipment grant, Ohio State University, \$50,000.
- Islam, K.R.** and S. Wright (2005) Potassium fertilization to enhance growth & antioxidant content of blueberries & black raspberries. Ohio Fruit Growers Assoc., \$1,500.
- Islam, K.R.** (2002 to 2008) Comparative Impact of N Fertilizers on Crop Yields, Weed Pressure, N leaching and Soil Quality. Agrium USA, Inc., \$65,270.
- Islam, K.R.** (2002 to 2005) Cover Crops, Chicken and Dairy Manures Impact on Crop Yields, Carbon Sequestration, and Soil Quality. Warner Endowment Fund for Sustainable Agric. Interdisciplinary Grant Program for On-farm Research, \$15,000.
- Islam, K.R.** and S. Wright (2003) Development of a simple test to evaluate water quality for mixing with pesticides. Ohio Fruit Growers Society \$1,000.
- Islam, K.R.** (2002) Biological-root protectant fungicide (T-22) effects on N-efficiency, Crop Growth and Soil Quality. Advanced Biological Marketing, \$3,500.
- Grewal, P., and **K.R. Islam** (2011 to 2014) Maximizing ecosystem services in the soil food web in organic farming systems. CERES Trust. \$178,929.
- Reeder, R.C. and **K.R. Islam** (2010) Soil properties after 25 years of tillage and drainage research. CTTC Research Grant, \$ 2,000.
- Hoorman, J. and **K.R. Islam** (2008 to 2010) Recycling nutrients with cover crops to decrease hypoxia while promoting sustainable crop production. NCR SARE Research and Extension grant, \$10,000.
- Hoorman, J. and **K.R. Islam** (2007 to 2008) Using Dairy Manure with Annual Ryegrass for Hbage Production. Oregon Ryegrass Association, \$10,000.
- Sundermeier, A.P. and **K.R. Islam** (2007) Managing Pests by Linking Plant Health to Soil Health: Soil Quality Workshop Proposal. Ohio IPM Grant Program, \$5,000.

Wright, S. and **K.R. Islam** (2002) Alternate year bearing trial for thorny blackberries. The Ohio Vegetable and Small Fruit Research and Development Program. \$750.

Technical Advisor

Brandt, D. (2009) Using Oilseed as Biological Plow to Reduce Soil Compaction, Recycle Nutrients, and Improve Soil Quality. NC SARE grant, \$6,000, 2009-2010.

Keith Gregory (2007) Integrated Nutrient Management by using Hog Manure to Improve Soil Quality for Economic Hay Production. NCR SARE producer grant. \$ 6,000.

Oxenrider, J. (2002) Agroforestry practices of ginseng and goldenseal in natural stands of hardwood forest trees. NCR SARE producer grant. \$ 5,800.

INTERNATIONAL EXPERIENCE

1. Internal Meetings/Conferences and Workshops

Organized and moderated the “Brain storing and grant writing” workshop, Institute of Land problems and Water Management, Kherson and Kyiv, Ukraine, June 15-20, 2019.

Organized and conducted a train the trainer workshop on “Brain storing and grant writing”, Kazak National Agrarian University, Almaty, April 4-5, 2019.

Organized “XXI Century – Climate-smart Agriculture International Meeting and Field Day”, Institute of Irrigated Agriculture of National Academy of Agrarian Sciences of Ukraine, Kherson/Askaniyske Farm, Tavrichanka village, Kahoka, Kherson. Ukraine. Sponsored by Civilian Research Defense Foundation, Government of Ukraine, and The Ohio State University, USA. Sep. 11-12, 2018.

Organized Climate-smart Agriculture Perspectives in Ghana – A Train the Trainer Workshop. Sponsored by Mandela Washington Fellowship (MWF) Program, Council for Scientific and Industrial Research-Crops Research Institute (CSIR-CRI), Ghana, and The Ohio State University. Crops Research Institute Training Center, Kumasi – Ghana. July 2 to July 6, 2018.

Organized Climate-Smart Agriculture & Soil Health Workshop. The Ohio State University, USDA-FAS Borlaug Program, and Environmental Institute for Agricultural Research (INERA) - Burkina Faso. February 27 & March 1, 2018.

Organized Climate-Smart Agriculture & Soil Health Workshop. The Ohio State University, USDA-FAS Borlaug Program, and Environmental Institute for Agricultural Research (INERA) - Burkina Faso. February 27 & March 1, 2018.

Organized Climate change, sustainable agriculture and soil health workshop, a series of five workshops in France. Sponsored by Biodiversite, Agriculture, Soil & Environment (WWW.ASSO-BASE.FR), Soin de la Terre, France & The Ohio State University. March 11-18, 2017.

Organized 21ST Century sustainable agriculture workshop (Dnipro, Ukraine) Agro-Soyuz Ukraine and Ohio State University. September 16 to 18, 2015.

West African soil health workshop. USDA-FAS, Ohio State University, and University of Cape Coast, Ghana. September 2 & 3, 2015.

Organized Soil health and sustainable agriculture workshop, Listowel, Ontario, Canada. Sponsored by USDA-NCR SARE, Ohio State University and Agriculture Solutions of Canada. August 21 and 22nd, 2013.

- Conducted an international workshop on continuous no-till and sustainable agriculture. Sponsored by Agro-Soyuz-Ukraine, Synelinkova district, Dnipropetrovsk region, Ukraine, June 16 to 21st, 2013.
- Organized International Conference on “Climate Change and Food Security in South Asia”, Dhaka, Bangladesh, 25 - 30 August 2008. Sponsored by Ohio State University, World Meteorological Organization, Food and Agriculture Organization, ESCAP, University of Dhaka, and the Gov. of Bangladesh. 2008.
- Organized workshop on Salinity and water management practices for improving crop production in Central Asia. Sponsored by USDA-FAS, Bukhara State University, Tashkent State Agrarian University, Samarkand Agriculture Institute, Urgence State University, Uzbekistan. April 3 – April 20, 2007.
- Organized workshop on Sustainable soil and water management practices for improving environmental quality in Central Asia. Sponsored by USDA-FAS, Tashkent State Agrarian University, Land Institute, and Samarkand Agriculture Institute, Uzbekistan. March 19 – April 5, 2006.
- Organized Sustainable soil and water management practices for improving environmental quality in Uzbekistan. Sponsored by USDA-FAS, Ohio State University, Tashkent State University of Economics, Tashkent State Irrigation and Amelioration Institute and Samarkand Agriculture Institute, Uzbekistan. March 3 – 17, 2005.
- Organized International Workshop on Impact of Climate Change on Agriculture: Challenges and Strategies. University of Arid Agriculture, Rawalpindi, Pakistan. Aug 27-30, 2003.

2. International Scholars Hosted

- Riti Chatterjee, Ph.D. Senior Research Fellow (CAAST on Conservation Agriculture), Dept. of Agricultural Extension, Bidhan Chandra Krishi Vishwavidyalaya, West Bengal, INDIA. 1/2/2020 to 7/31/2020.
- Emmanuel Compare, Visiting scholar, Institute of Environment and Agricultural Research (INERA), Dept. Natural Resources Management and Production Systems, Ouagadougou, Burkina Faso. 10/28/2019 to 12/1/2019.
- Kateryna Chorna, Institute of Water Problems and Land Reclamation, Kiev, Ukraine, 6/24/2019 to 8/26/2019.
- Du Xiajin (Jacky), Sustainable Research Agricultural Technology, Heilongjiang Academy of Agric. Sciences, Jiamusi, China. 04/15/2019-06/14/2019.
- Dr. Sergey Lavrenko, Dept. of Agronomy, Kherson State Agrarian University, Kherson, Ukraine. 9/15/2018 - 11/12/2018.
- Cai Lejun (Cynthia), Sustainable Research Agricultural Technology, Heilongjiang Academy of Agric. Sciences, Jiamusi, China. 11/1/2017-1/1/2018.
- Prof. Yilmaz Bayan, Dept. of Biosystems Engineering, Namik Kemal University, Tekirdag, Turkey. Tubitek post-doctoral scholar, 7/10/2017-6/30/2018.
- Dr. Alimata A. Bandaogo, USDA-Borlaug short-term visiting scholar, INERA. Burkina Faso. 9/19/2017 – 12/18/2017.
- Mavis Akom, Mandela-Washington scholar, CSIR-Crop Research Institute, Kumasi, Ghana. 7/2017 – 8/2017.
- Dr. Emmanuel Amoakwah, Borlaug LEAP Scholar. CSIR-Central Soil Testing Laboratory, Kumasi, Ghana. 12/2016 – 9/20.

Dr. Botir Khaitov, Fulbright Research Fellow, Senior Researcher and Associate Professor, Tashkent State Agrarian University, Uzbekistan. 10/2016 – 8/2017.

Emmanuel Odama, Mandela Washington scholar, Agriculture Research Institute, Uganda. 7/2016 -8/2016.

Gai Zhijia (Peter), Deputy Director of Sustainable Research Agricultural Technology, Heilongjiang Academy of Agric. Sciences, Jiamusi, China. 9/2016-11/2016.

Dr. Nataliia Didenko, Norman Borlaug Short-term scholar Institute of Water Problems and Land Reclamation, National Academy of Agrarian Sciences of Ukraine. Kyiv, Ukraine. 8/2016 – 11/2016.

Liu Jinqi, Sustainable Research Agricultural Technology, Heilongjiang Academy of Agric Sci. (Jiamusi) of China, Heilongjiang Province, China. 2015.

Dr. Emmanuel Amoakwah, Norman Borlaug Short-term scholar. Central Soil Testing Laboratory, Kumasi, Ghana. 10/2014 – 1/2014.

Dr. Aksakal Ekrem, Tubitek post-doctoral scholar, Ataturk University, Erzurum, Turkey. 4/2012–7/2013.

Dr. Celal Yucel, Fulbright research scholar/Tubitek scholar, East Mediterranean Agricultural Research Institute, Adana, Turkey. 2011 – 2013.

Dr. K. Ramesh, USDA-Borlaug Scholar. Indian Institute of Soil Science, Madhya Pradesh, India. 7/2011 – 10/2011.

Derya Yucel, Tubitek scholar, East Mediterranean Agricultural Research Institute, Adana, Turkey. 2011

Dr. Kenan Barik, Tubitek scholar, Ataturk University, Turkey. 2008 -2012.

INTERNATIONAL RESEARCH AND OUTREACH COLLABORATION

2019 to present: Academic, Research and Extension collaboration with Kazak National Agrarian University, Almaty, Kazakhstan.
Guide on field research capacity development related to no-till, cover crops, soil fertility, etc. Sponsored faculty members// graduate students to visit Ohio State University for developing professional capacity on field research and Extension and outreach programs and data analysis.

2017 to present: Academic, Research and Extension collaboration with Tashkent State Agrarian University, Tashkent, Uzbekistan.
Mentor on field research capacity development related to no-till, cover crops, soil fertility, etc. Sponsored Uzbek scholars every year to visit Ohio State University for developing professional capacity on field research and Extension and outreach programs and data analysis.

2016 to present: Academic, Research and Extension collaboration with Institute of Water Problems and Land Reclamation, Irrigated Research Institute, Askenesia Experimental Station, and Kherson State Agrarian University, Ukraine.
Sponsored Ukrainian scholars every year to visit Ohio State University for developing professional capacity on field research and Extension and outreach programs and data analysis and interpretation.

2016 to present: Academic, Research and Extension collaboration with Zhytomyr Agrarian University and Dnipro State Agrarian and Economic University, Ukraine.

Sponsored Ukrainian scholars every year to visit Ohio State University for developing professional capacity on academic teaching, field research and Extension and outreach programs and data analysis and interpretation.

2014 to present: Academic, Research and Extension collaboration with Chinese Academy of Agricultural Sciences (Heilongjiang Province), China.

Visit China every year as a foreign expert (US) to guide on field research capacity development related to no-till, cover crops, soil fertility, etc. Sponsored Chinese scholars every year to visit Ohio State University for developing professional capacity on field research and Extension and outreach programs and data analysis.

ACADEMIC, RESEARCH AND OUTREACH COLLABORATION PARTNERS

National (Internal, OSU)

- School of Environment and Natural Resources
- Dept. of Agriculture & Biological Engineering
- Dept. of Entomology
- Dept. of Horticulture & Crop Sciences
- Dept. of Plant Pathology
- Dept. of Biomedical Engineering
- Dept. of Food Science and technology
- Civil, Environmental and Geodetic Engineering Dept.
- Ohio State University Extension.
- BioHio
- Ohio Sea Grant

External (University)

- Central State University
- Rio Grande University
- Shawnee State University
- Department of Soil and Plant Sciences, Alabama A&M University
- Natural Resource Sci. & Landscape Arch., University of Maryland at College Park
- Dept. Cell & Molecular Biology, Western Kentucky University at Bowling Green
- Kentucky State University
- Kansas State University
- Michigan State University
- Missouri State University
- University of Nebraska-Lincoln
- University of California-Davis

Industries/Organizations

- Ohio No-Till Council
- Conservation Tillage and Technology Conference
- Ohio Environmental Protection Agency
- Battelle Memorial Institute
- Advanced Biological Marketing, OH
- Bechtel-Jacobs, OH
- Innovative Farmers of Ohio

- Rural Action, OH
- Soil and Water Conservation Service
- Stratford Ecological Center, OH
- US Forest Service/Wayne National Forest
- Lakewood Engineering, Cleveland.
- USDA-ARS Alabama, Indiana, and Michigan

International

- Developed “Sandwich exchange program” for academic, research, and Extension programs with Bangladesh, Brazil, Burkina Faso, China, Egypt, France, Ghana, India, Kazakhstan, Pakistan, Turkey, Ukraine, and Uzbekistan.
- Funded research collaboration with Mitsui Chemicals, Inc., Japan.

AWARDS, FELLOWSHIPS AND SCHOLARSHIPS

- American Council for International Education Award, Kazakhstan, 2019,
- Mandela Washington Fellowship Mentor Award, 2018
- OARDC International Research Travel Grant, 2018
- CRDF funded US-Ukraine Research Collaboration, Ukraine, 4/7-17, 2018.
- USDA-Borlaug Mentor award to visit Burkina Faso, 2/26/2018
- USDA-Borlaug Mentor award to visit Ukraine, 9/2017
- Connect and Communications award to visit France, 3/2017
- USDA-Borlaug Mentor award to visit Ghana, 8/2015
- Fulbright Teaching Fellowship to Turkey, 2014-2015.
- Visiting Scholar, Chinese Academy of Agricultural Sciences, 2014-2017.
- Nominated for OARDC Director’s Innovation Award, 2013
- OARDC Professional Development Scholarship, 2003 to 2017
- Visiting Scholar Award, Erzurum University, Turkey, 2010
- Epsilon Sigma Phi State Team Award, 2005 -2010
- No-Till Researcher and Educator Award, Ohio No-Till Council, 2009
- OARDC international travel grant, 2005, 2008 and 2018.
- USDA-Foreign Agriculture Service Faculty Exchange Program, 2005-2007
- Manchester Who’s Who, 2004-2005
- Appreciation award, 2005 from OSU/KSU/Purdue/UK
- Certificate of appreciation, The OSU Extension/OADC, 2004
- Gamma, Sigma and Delta Outstanding Researcher, 1999,
- American Society of Agronomy Award, 1997
- Maryland Industrial Partnerships/Westinghouse Award, 1994-1996,
- FAO Fellowship, 1987.
- USAID Fellowship, 1986.
- Australian Government Scholarship (for M.S.) 1985-1987

INVENTION AND TECHNOLOGY TRANSFER (Patent)

Islam, K.R. (2018) A simple and users’ friendly field test kit to evaluate soil health for farmers. Global License, SoilOne Inc. (<https://soil1.com/>), Springfield, Ohio thru OSU

Office for Technology and Licensing Office of the Ohio State University.

Islam, K.R., Shedeekar, V., Reeder, R.C., and J. Grigar (2018) A farmers' friendly "Soil organic matter and ecosystem services calculator (software)". Office of Technology and Licensing of the Ohio State University for invention disclosure (Patent), 2018. Nominated for OARDC Director's Innovation Award.

PUBLICATIONS

Published peer-reviewed journal articles

- Islam, KR, Greg Roth, Mohammad A. Rahman, Nataliia O. Didenko, and Randall C. Reeder (2021) Cover Crop Complements Flue Gas Desulfurized Gypsum to Improve No-till Soil Quality. *Commun. Soil Sci. Plant Anal.* <https://doi.org/10.1080/00103624.2021.1872594>
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- Vinayak Shedekar, Rafiq Islam, Randall Reeder (2014) A farmer-friendly tool for predicting soil organic matter. Ohio Country Journal Article.
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PROFESSIONAL PRESENTATIONS

National Professional/Society Meeting Presentations/Abstracts

- Islam, K.R., Roth, G., Rahman, M.A., Didenko, N.A., and R. Reeder (2020) Can cover crop complements flue gas desulfurized gypsum to support carbon farming for improving soil quality? *In: Soil Carbon Farming for Climate Change Solutions session. SSSA Division: Soil and Water Management and Conservation. ASA/CSA/SSSA International Meetings, Phoenix, AZ, Nov. 8-10, 2020 (Invited paper to be presented).*
- Chatterjee, R., Rahman, M.A., Didenko, N.O., Bandaogo, A.A., Rahman, M.M.R., and A.P. Sundermeier, and Islam, K.R. (2020) Carbon: nitrogen stoichiometry as an indicator of soil carbon sequestration. *In: Soil Carbon Farming for Climate Change Solutions session. SSSA Division: Soil and Water Management and Conservation. ASA/CSA/SSSA International Meetings, Phoenix, AZ, Nov. 8-10, 2020 (Invited paper to be presented).*
- Yucel, D., Yucel, C., Rahman, M.A., and K.R. Islam (2020) Increasing Soil Aggregate Protected Carbon and Nitrogen for Climate Change Solutions. *In: Soil Carbon Farming for Climate Change Solutions session. SSSA Division: Soil and Water*

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- Begum, R., Jahangir, M.M.R., Jahiruddin, M., Islam, M.R., Bokhtiar, S.M., Bell, R.W., Islam, K.R. (2020) Tillage and residue management impact on labile carbon pools and their stratification in soil under a subtropical wheat-bean-rice cropping sequence. In: Soil Carbon Farming for Climate Change Solutions session. SSSA Division: Soil and Water Management and Conservation. ASA/CSA/SSSA International Meetings, Phoenix, AZ, Nov. 8-10, 2020 (Invited paper to be presented).
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- Pattadar, S.N., Maxwell, J., Smith, M., Bergefurd, B., Krishnakumar, N., Slater, B., and K.R. Islam (2020). Is fish quality healthier in aquaponics? Paper presented at World Aquaculture Society America Conference, February 9-12, 2020 Honolulu, Hawaii, USA.
- Maxwell, J., Pattadar, S.N., Smith, M., Bergefurd, B., Krishnakumar, N., Slater, B., and K.R. Islam. (2020) Aquaponics system impacts on lettuce yield and quality. Poster presented at World Aquaculture Society America Conference, February 9-12, 2020 Honolulu, Hawaii, USA.
- Islam, K.R., Didenko, N., and Konovalova, V. (2019) Healthy Food Connects to Healthy Soils. Paper to be presented at the American Society of Agronomy/Crop Science Society of America/Soil Science Society of America International Annual Meeting, Nov. 10-13, San Antonio, Texas, USA.
- Rafiq Islam, Vinayak S. Shedekar, Yogendra Raut, Alima A Bandaogo, Javier Gonzales, Dexter B. Watts, Dennis Flanagan, Tara Van Toai, Norman Fausey, Marv Batte, and Warren A Dick (2019) Predicting Soil Carbon and Nitrogen Stocks Under No-till Soybean-Corn Amended with FGD Gypsum and Cover Crops. Paper to be presented at the American Society of Agronomy/Crop Science Society of America/Soil Science Society of America International Annual Meeting, Nov. 10-13, San Antonio, Texas, USA.
- Schumacher William, Melanie Rudolf, Jordan Maxwell, Vinayak S. Shedekar, Yogendra Raut and Rafiq Islam (2019) Are Soil Parameters Able to Predict Forested Wetland Health? Paper to be presented at the American Society of Agronomy/Crop Science Society of America/Soil Science Society of America International Annual Meeting, Nov. 10-13, San Antonio, Texas, USA.
- Vinayak S. Shedekar, Khandakar R. Islam, Norm Fausey, Dexter B. Watts, Javier Gonzalez, Warren A Dick, Tara VanToai, Dennis Flanagan, Marv Batte and Randall C Reeder (2019) Effect of Cover Crops and Crop Rotation on Physical Properties of Soils Amended with Flue Gas Desulfurization Gypsum. Paper presented at the American Society of Agronomy/Crop Science Society of America/Soil Science Society of America International Annual Meeting, Nov. 10-13, San Antonio, Texas, USA.
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- Islam, K.R., Randall Reeder, and Greg Roth (2017) Does Industrial Gypsum with Cover Crop Improve Soil Biological and Physical Quality? Presented at the ASA Southern Branch Meeting, February 7, 2017, Mobile, AL.
- Islam, K.R. and A. Sundermeier (2017) Management systems impact on soluble reactive phosphorus sorption, saturation, and storage capacity in soil. Presented at the All-Ohio Chapter SWCD Annual Conference, January 20, 2017, Plain City, OH.
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- Amoakwah, E. and K.R. Islam (2016) Soil Organic Matter Quality and Storage Under Different Land-Use Systems Following Primary Deciduous Forest Conversion. Session on Soil Management Impacts on Soil Properties and Soil C and N. Presented at the ASA/CSA/SSSA International Meetings, Phoenix, AZ.
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- Islam, K.R. (2015) Increasing Cropping Diversity Under Continuous No-till Improves Soil Health and Crop Productivity. Presented at ASA-CSA-SSA Meetings, Minneapolis.
- Islam, K. R. and Y. Raut (2015) Emissions of Dissolved Greenhouse Gases in the Subsurface Drainage from Different Tillage and Cropping Systems. Paper presented at the ASA-CSA-SSA International Meetings, Minneapolis, MN.
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- Weeks, E.N., Cooper, B., Shope, E. and K.R. Islam (2014) Management Practices Impact Soil Phosphorus Speciation. Paper presented at the ASA-CSA-SSA International Meetings. Long Beach, CA.
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- Shedekar, V., K.R. Islam, Reeder, R.C. and J. Grigar (2014) Evaluation of a Farmer-Friendly Tool for Predicting Soil Organic Matter and Ecosystem Services in Ohio Soils. Paper presented at the ASA-CSA-SSSA Meetings. Long Beach, CA.
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- Reeder, R. C., Sundermeier, A. P., Raut, Y., and Islam, K. R. 2008. Drainage and tillage impact on Particulate Organic Matter, Associated Carbon, and Nitrogen. ASA/CSSA/SSSA Annual International Meetings, Houston, TX. Oct. 5-9, 2008.
- Hoorman, J., A. Sundermeier C. Bruynis Y. Raut, and K.R. Islam (2008) Dairy manure and cover crops effect on soil biological properties, C fractions, & bulk density. ASA/CSA/SSSA Meetings, Houston, TX.
- Raut, Y., Irfan Aziz, and K. R. Islam (2008) Tillage and Crop Rotation Impact on Soil Organic Matter Quality. ASA Meetings, Houston, TX.
- Islam, K.R. (2008) Instant Field Soil Quality Test Kit. Presented at the ASA/CSA/SSSA International Meetings, Houston, TX.
- Randall Reeder, Alan Sundermeier, Y. Raut, and K.R. Islam (2008) Drainage and Tillage Impact on Particulate Organic Matter Associated C and N Content in Soil. ASA Meetings, Houston, TX.
- Hoorman, J., Alan Sundermeier, Chris Bruynis, Y. Raut, and K. R. Islam (2008) Manure and Cover Crops Effect on Nitrogen Dynamics in No-till Soil. ASA International Meetings, Houston, TX.
- Randall Reeder, Alan Sundermeier, Y. Raut, and K.R. Islam (2008) Long-Term Effects of Drainage and Compaction on Microbial Biomass, Total and Active Carbon Content of Soil. ASA Meetings, Houston, TX.
- Reeder, R.C., Sundermeier, A., Raut, Y., and Islam, K.R. (2008) Drainage and tillage impact on particulate organic matter associated C and N content in soil. ASA Meetings, Houston, TX.
- Aziz, I., Mahmood, T., Raut, T. and K.R. Islam (2008) Management-induced soil carbon sequestration index. ASA Meetings, Houston, TX.
- Islam, K.R. (2008) Cover crops and water quality. Water Association Management of Ohio Conf., Columbus, Ohio, Thursday, November 20, 2008.
- Islam, K.R. (2008) Cover crops effects on N leaching. USDA-Water Management Association of Ohio (WMAO) Management controlled Drainage Conference. Columbus, OH. Sept. 18. Saturday, 2008.
- Islam, K.R. (2008) Benefits of Cover crops: N fertilization and Soil quality. Annual Soil and Water Conservation Society Meetings, Ohio Department of Agriculture, Reynoldsburg, Thursday, February 07, 2008.

- Sundermeier, A.P., and Islam, K.R. (2007) The Impact of Tillage on Carbon Sequestration in Soil [Abstract]. Proceedings 92nd Annual Meeting & Professional Improvement Conf., Nat Assoc. County Agric Agents, Grand Rapids, MI. p 51.
- Clevenger, W.B. and K.R. Islam (2006) Gypsum as a Soil Amendment for Economic Crop Production. International Annual Meetings of ASA/Crop Science Society of America/Soil Science Society of America, Indianapolis, Indiana, Nov. 12-16.
- Sundermeier, A. and K.R. Islam (2006) Tillage impacts on carbon sequestration. International Annual Meetings of ASA/Crop Science Society of America/Soil Science Society of America, Indianapolis, Indiana, Nov. 12-16, 2006.
- Islam K.R. (2006) Test of active organic matter as a measure of soil quality. 18th World Soil Science Congress, Philadelphia, USA. 18th World Congress of Soil Science, Philadelphia, Pennsylvania, USA, July 9-15, 2006
- Khan HR, SM Kabir, MMA Bhuiyan, Hans-Peter Blume, Tadashi Adachi, Y. Oki, and K.R. Islam (2006) Physico-chemical amendments of acid sulfate soil for rice production in Bangladesh. 18th World Soil Sci Cong, Philadelphia, PA, July 9-15.
- Qushimov, B., I.M. Ganiev, I.M., P. Elmuratov, K.R. Islam, A. Lines, and D.O. Hansen (2005) Agricultural and Economic Indicators and Climate Change in Caucasian and Central Asian Regions. Paper presented at Carbon sequestration in Central Asia workshop. Organized by ICCARDA/Ohio State University, Ohio. 2-4 Nov.
- Islam, K.R. and A. Sundermeier (2005). Biological, chemical, and physical sequestration of soil carbon in response to tillage. Paper presented at 3rd USDA Symp. greenhouse gases & C sequestration in agriculture and forestry. Baltimore, March 21-24.
- Apsley, D.K. K.R. Islam, and P.S. Perry (2005). Sequestration of soil C on Ohio mine sites after reclamation and reforestation. Presented at 3rd USDA Symp. on greenhouse gases & C sequestration in agriculture and forestry. Baltimore, March 21-24.
- Teferi D. Tsegaye, K.R. Islam, Alton B. Johnson, and Asmare Atalay (2005). Temporal changes in chemical water quality of streams in response to land use practices. Platform Presentation. 15th Annual West Coast Conf. on Soils, Sediments and Water in San Diego, March 14-17, 2005.
- Brown, L.C., N.R. Fausey, S.R. Workman, K.R. Islam, Y. Ganesan, S.E. Subler, and P. Bierman (2005) Reducing runoff, drainage, and nitrate transport from a corn-soybean agroecosystem using water table management. SWCS Conference, Drainage Session.
- Islam, K.R., P.B. Bapst, and W.W. Lewis (2004) Temporal effect of land-use practices on C sequestration in soil. American Soc. Agronomy (ASA) Meetings, Seattle, WA.
- Islam, K.R., J.C. Fisher, and P.B. Bapst (2004) Effect of organic amendments on crop yields and soil quality. ASA Meetings, Seattle, WA.
- Sundermeier, A.P. and K.R. Islam (2004) Land-use effects on soil C sequestration. ASA Meetings, Seattle, WA.
- Sundermeier, A.P. and K.R. Islam (2004) Impacts of agronomic practices on soil quality. ASA Meetings, Seattle, WA.
- Baker, B.J., Fausey, N. R., and Islam, K.R. (2004). Comparison of soil carbon levels under two different water table management regimes. ASA Meetings, Seattle, WA.
- Blaylock, A.D., R.D. Dowbenko, J. Kaufmann, G.D. Binford, and K. R. Islam (2004) ESN[®], Controlled-Release Nitrogen for Enhanced Nitrogen Efficiency and Improved Environmental Safety. Amer. Chem. Soc. Meetings, Philadelphia.

- Tsegaye T.D. and K.R. Islam (2004) Chemical and biological quality of stream water in response to land use practices. Annual Alabama Water Resources Conf. and Symp. (Alabama Section of the American Water Resources Association), Orange Beach, Alabama September 8-10.
- Tsegaye, T.D., K.R. Islam, L.J. Marzen, and A. Johnson (2004) Physical quality of stream water in response to land use practices. Annual Alabama Water Resources Conference and Symposium (Alabama Section of the American Water Resources Association), Orange Beach, Alabama September 8-10.
- Islam, K.R., E.W. Grigsby, A.E. Welch, and S.R. Wright (2003) Sewage sludge effects on soil quality properties. ASA Meetings. Denver, CO.
- Islam, K.R., C.L. Mulchi, and B. Momen (2003) Soil C partitioning in response to long-term effects of elevated CO₂ and O₃ concentrations on wheat-soybean agroecosystems. ASA Meetings. Denver, CO.
- O'Brien J.D. and K.R. Islam (2003) Tillage and crop rotation effects on C stocks in soil aggregate fractions. ASA Meetings. Denver, CO.
- Islam K.R. (2003) Management of crop residues in response to climate change. Paper presented at the International workshop on Impact of climate change on agriculture: Challenges and Strategies. Univ. Arid Agriculture, Rawalpindi, Pakistan
- Islam K.R. (2003) Management of agricultural soils. Paper presented at the International workshop on Impact of climate change on agriculture: Challenges and Strategies. University of Arid Agriculture, Rawalpindi, Pakistan.
- Islam K.R. (2003) Identification of C sequestration potentials in different agroecosystems. Paper presented at the International workshop on Impact of climate change on agriculture: Challenges & Strategies. Univ. Arid Agriculture, Rawalpindi, Pakistan.
- Islam K.R. (2003) Tillage and cropping rotation effect on soil quality. Paper presented at the Midwest Conservation Tillage Conf., June 19-20 OARDC, Wooster, OH.
- O'Brien, J.D., K.R. Islam, S.R. Wright, and B.P. Bapst (2002) Long-term tillage & cropping systems effect on soil C sequestration in Southern Central Ohio. Presented at USDA Symp. on natural resource management to offset GHG emission. Raleigh, NC.
- Islam, K.R., P.B. Bapst, S.R. Wright, W.W. Lewis, L.R. Miller, M.C. Welch (2002) Cropping systems effect on soil quality. ASA Meetings, Indianapolis, IN.
- Bapst, P.B., K.R. Islam, W.W. Lewis, L.R. Miller, R. Lal, and N.R. Fausey (2002) Soil carbon sequestration under different management practices. ASA/CSA/SSSA International Meetings, Indianapolis, IN.
- Weil, R. R., K. R. Islam, M. A. Stine, J. B. Gruver, and S. E. Sampson- Liebig (2002) New active C field method is easier to perform and relates better to soil functions than total organic matter? ASA Meetings, Indianapolis, IN.
- Islam, K.R., C.L. Mulchi, R.R. Weil, and B. Momen (2001) Vertical distribution of organic C, N and H contents in soils in response to elevated CO₂ and O₃ concentrations. ASA Meetings, Charlotte, NC.
- Islam, K.R., C.L. Mulchi, R.R. Weil, and B. Momen (2001) Distribution of C, N and H contents of in soil aggregates as influenced by elevated CO₂ and O₃ in agroecosystems. ASA Meetings, Charlotte, NC.
- Min, D.H., K.R. Islam, R.R. Weil, and L.R. Vough (2001) Temporal changes in soil quality properties in response to dairy manure slurries and chemical fertilization for forage production. ASA Meetings, Charlotte, NC.

- Weil R.R. and K.R. Islam (2001) Microwave irradiation for estimating microbial biomass in soil. ASA Meetings, Charlotte, NC.
- Momen, B., K.R. Islam, C.L. Mulchi, and R. Rowland (2001) Temporal changes in soil N and C contents in response to elevated CO₂ and O₃ in agroecosystems. 2nd International Nitrogen Conference, MD, 2001.
- Islam, K.R., R.R. Weil and C.L. Mulchi. (2000) Leaf litter quality of soybeans subjected to ambient, high CO₂ and high O₃ atmospheres. ASA Meetings, Minneapolis, MN.
- Mulchi, C.L., M.S. Yoo, and K.R. Islam. (2000) Soil organic matter-metal interactions under elevated CO₂ and O₃ concentrations. ASA Meetings, Minneapolis, MN.
- Weil, R.R., K.R. Islam, and C.L. Mulchi. (2000) Impacts of elevated CO₂ and O₃ on carbon cycling processes in soil. ASA Meetings, Minneapolis, MN.
- Islam, K.R., C.L. Mulchi, and B. Momen. (2000) Temporal changes in soil organic matter quality in response to elevated CO₂ and O₃. Northeast Branch of ASA Meetings, Univ. Delaware, Newark, DE.
- Islam K.R. and R.R. Weil (1999) Permanganate reactive C test for soil quality: Development of a field kit. ASA meetings, Salt Lake City, UT.
- . Islam, K.R and C.L. Mulchi (1998) Sterilization of soil and greenhouse media by RF energy. ASA Meetings, Baltimore, MD.
- Ali, A.A., K.R. Islam, and C.L. Mulchi (1998) Carbon and nitrogen status of plants and soils in tropospheric CO₂ or O₃ enrichment agroecosystems. ASA/CSA/SSSA
- Weil R.R. and K.R. Islam (1998) Biologically, chemically, and physically defined soil active organic matter under different management regimes. ASA/CSA/SSSA International Meetings, Baltimore, MD.
- Weil, R.R., D.B. Freidman, J.B. Gruver, K.R. Islam, and M.A. Stine (1998) Soil quality research and education at MD: an integrated approach. ASA/CSA/SSSA International Meetings, Baltimore, MD.
- Mulchi, C.L., K.R. Islam, and S.D. Glenn (1998) Eradication of weeds by high-powered microwave energy. ASA/CSA/SSSA International, Baltimore, MD.
- Ali, A.A., C.L. Mulchi, K.R. Islam, Y.A. Elzawahry, and R.I. Abdelfattah (1998) Soil respiration responses to atmospheric CO₂, O₃, and soil moisture regimes in soybean-wheat agroecosystems. ASA/CSA/SSSA International, Baltimore, MD.
- Islam K.R. and D.S. Fanning (1998) Arsenic poisoning of shallow tube-well water in Bangladesh. XII FOBANA Conference, New York.
- Ali, A.A., C.L. Mulchi, Y.A. Elzawahry and K.R. Islam (1998) Influence of atmospheric CO₂, O₃ and moisture regime on carbohydrate and N contents in soybean. Northeast Branch of ASA Meetings. Univ. Massachusetts, Amherst.
- Islam, K.R., C.L. Mulchi, and A.A. Ali (1997) Effects of elevated atmospheric CO₂ and O₃ on quantity and quality of soil organic C. NE Branch of ASA Meetings. Univ. Maryland.
- Mulchi, C.L. and K.R. Islam (1997) Influence of elevated atmospheric CO₂, O₃ and moisture on soil quality of agroecosystems. Poster presented at ASA Meetings, Anaheim, CA.
- Islam, K.R. and R.R. Weil (1997) Seasonal stability of soil quality indices across seasons and regions. ASA meetings at Anaheim, CA.
- Mulchi, C.L. and K.R. Islam (1997) Effect of climate variables on soil respiration. ASA/CSA/SSSA International Meetings, Anaheim, CA.
- Islam, K.R., R.R. Weil, C.L. Mulchi, and S.D. Glenn (1995) Freeze-dried soil extraction method to measure microbial biomass C. ASA Meetings, St. Louis, MO.

- Weil, R.R. and K.R. Islam (1995) A rapid microwave digestion procedure for spectrophotometric measurement of soil organic C. ASA Meetings, St. Louis, MO.
- Islam, K.R., D.S. Fanning, and M. Goldflower (1995) Phyllosilicate mineralogy and anthropogenic iron oxide transformations in Alfisols from Zimbabwe. Clay Minerals Soc. Meetings, Baltimore, MD.
- Islam, K.R. and R.R. Weil (1993) Routine test for active organic C as a soil quality index. ASA Meetings. Cincinnati, OH.

International Professional/Workshop/Meeting/Invited Presentations

- Islam, K.R. (2021) Nano-fertilization and chemical inducing to improve crop growth. ISCA Webinar on INTERNATIONAL SYMPOSIUM ON COASTAL AGRICULTURE, West Bengal, India. 16th to 19th MARCH 2021. To be presented.
- Islam, K.R. (2020) Climate-Smart Agricultural Renaissance and Global Food Security. International Symposium (ONLINE) on Food Security and the Stand of Civilization: Agri-Horti-Livestock Dynamics in Changing Global Ecology. Organized by Bidhan Chandra Krishi Vishwavidyalaya, India, Lincoln University College, Malaysia, and University of Bengkulu, Indonesia. September 20 and 21, 2020.
- Islam, K.R. and Nataliia D. (2020) Organic Production: Principles and World Experience. Institute of Water Problems and Land Reclamation of the National Academy of Agrarian Sciences of Ukraine, together with the European Bank of Reconstruction and Development (EBRD).
- Wilson, A., Islam, K.R., Sundermeier, A, and Shedekar, V. (2020) Building Agricultural Resilience to a Changing Climate. Ohio Ecological Food and Farm Association (OEFFA) annual conference held in Dayton, Ohio, Feb. 14, 2020.
- Islam, K.R. (2020) Climate-Smart Organic Grains for Healthy Soils, Healthy Food, and Healthy People. Ohio Ecological Food and Farm Association (OEFFA) annual conference held in Dayton, Ohio, Feb. 15, 2020.
- Islam, K.R. (2020) Climate-Smart Organic Vegetables for Healthy Soils, Healthy Food, and Healthy People. Ohio Ecological Food and Farm Association (OEFFA) annual conference held in Dayton, Ohio, Feb. 15, 2020.
- Bergefurd, B., Islam, K.R., Nedunuri, K.K., Smith, M., Worley, T., and J. Maxwell (2020) Building Educational Capacity Through Collaborative Aquaponics Extension Education. Presented at the World Aquaculture Society America Conference-2020, Honolulu, Hawaii, USA, 9-12 Feb. 2020.
- Pattadar, S., Jordan Maxwell, Matt Smith, Brad Bergefurd, Krishna Kumar Nedunuri, Brian Slater, and Rafiq Islam (2020) Is fish quality healthier in aquaponics? Presented at the World Aquaculture Society America Conference-2020, Honolulu, Hawaii, USA, 9-12 Feb. 2020.
- Jordan Maxwell, Pattadar, S., Matt Smith, Brad Bergefurd, Krishna Kumar Nedunuri, and Rafiq Islam (2020) Aquaponic System Impacts on Lettuce Yield and Quality. Presented at the World Aquaculture Society America Conference-2020, Honolulu, Hawaii, USA, 9-12 Feb. 2020.
- Islam, K.R. (2019) 21st Century Climate Smart Agriculture in Relation to Kazakhstan. Rafiq Islam, program leader for the Soil, Water, and Bioenergy Resources at The Invited presentation at the 4th International AgTech Summit, Kazak National Agrarian University, Almaty, Republic of Kazakhstan. December 6, 2019.

- Didenko, N., Konovalova, V., Romashenko, M., and K. R. Islam (2019) Using climate-smart agriculture to improve irrigated crop yield and soil quality in Ukraine. To be presented at the INTERNATIONAL BIOLOGICAL, AGRICULTURAL AND LIFE SCIENCE CONGRESS (BIALIC) Nov. 7-8, 2019, Lviv, Ukraine.
- Islam, K.R. (2019) Invited lecture on Climate-smart agriculture to the students and faculty members, Kherson State Agrarian University, Kherson, Ukraine, June 17, 2019.
- Islam, K.R. (2019) Invited lecture on successful grant writing to the faculty members, Kazak National Agrarian University, Kherson, Ukraine, June 17, 2019.
- Islam, K.R. and N. Didenko (2018) Impact of sustainable agricultural management practices on soil quality & crop productivity. Presented at the “XXI Century – Climate-Smart Agriculture”, International Meeting and Field Day, Institute of Irrigated Agriculture of National Academy of Agrarian Sciences of Ukraine, Kherson/Experimental farm “Askaniyske”, Tavrichanka village, Kahovka, Kherson, September 11-12.
- Islam, K.R., Akom, M., and Amoakwah, E. (2018) Rethinking Agriculture in the 21st Century. Crops Research Institute (CSIR-CRI), Kumasi – Ghana, 6th July 2018.
- Islam, K.R. (2018) Crop rotation and cover crops. Crops Research Institute (CSIR-CRI), Kumasi – Ghana, 6th July 2018.
- Islam, K.R. (2018) Sustainable agriculture decision tools (Soil quality test demonstration). Crops Research Institute, Kumasi – Ghana, July 6, 2018.
- Islam, K.R. (2018) Brain storming session: Current agricultural problems. Crops Research Institute (CSIR-CRI), Kumasi – Ghana, 6th July 2018.
- Islam, K.R. (2017) Sustainable agricultural management practices and combat climate mitigation and adaptation. Institute of Land and Water Management, Ministry of Agriculture, Kyiv, Ukraine.
- Islam, K.R. (2017) Soil quality evaluation and management. Presented at the Academic Exchange and Site Demonstration Conference. Sponsored by Heilongjiang Academy of Agricultural Sciences – Jiamusi Branch and Heilongjiang BaWuSi Farm, August 13, 2017.
- Islam, K.R. (2017) Climate-smart Agriculture and Soil Health. Presented at Climate-smart agriculture and soil health workshop. Sponsored by Biodiversite, Agriculture, Soil & Environment (WWW.ASSO-BASE.FR), Soin de la Terre, and
- Islam, K.R. (2017) Management Systems and Soil Health Evaluation. Presented at Climate-smart agriculture and soil health workshop. Sponsored by Biodiversite, Agriculture, Soil & Environment (WWW.ASSO-BASE.FR), Soin de la Terre, and Ohio State University. March 11-18, 2017.
- Islam, K.R. (2016) My Experience as One of the Borlaug Mentors. Presented at the USDA-Borlaug sponsored Borlaug Fellowship Program Mentors Workshop, June 2-3, 2016, Washington State University–Spokane, Washington.
- Islam, K.R. (2016) Climate Change and Future Agriculture with Reference to China. Presented at the Chinese Academy of Agricultural Sciences, Heilongjiang- Jiamusi Branch, China. September 12, 2016.
- Islam, K.R. (2016) No-till Technology Research Progress and Use in the world. Presented at the Chinese Academy of Agricultural Sciences, Heilongjiang- Jiamusi Branch, China. September 28, 2016.

- Islam, K.R., Emmanuel Amoakwah, Bosiako Antwi, Francis Tetteh, and Kwabena Nketia (2015) The Systems Approach to Sustainable Agriculture. Presented at the Climate Change, Soil health and Sustainable Agriculture workshop, Cape Coast, Ghana, September 4, 2015.
- Islam, K.R. (2015) Soil quality and soil sampling. Presented at the Climate Change, Soil health and Sustainable Agriculture workshop, Cape Coast, Ghana, Sep 3, 2015.
- Islam K.R. (2014) Sustainable Agroecosystem Services: Education, Research, and Extension Paradigm. Presentation delivered as part of the Fulbright Teaching Fellowship at the Faculty of Agriculture, Cukurova University, Adana, Turkey.
- Islam K.R. (2014) Expected Climate Change and Agroecosystem Services in Turkey. Presentation delivered at GAPTEM Institute, Sanliurfa, Turkey.
- Islam K.R. and Yucel C (2014) Integration of no-till, cover crops and zeolite to maximize agroecosystem services in dry regions of Turkey. Presentation at the Turkish Ministry of Agric. for pursuing Global Environmental Funding, Ankara, Turkey.
- Islam, K.R. (2014) Sustainable agriculture and ecosystem services. Presentation delivered at the Chinese National Academy of Sciences, Jumas Branch, China.
- Islam, K.R (2013) Cover Crop and Tillage Impact on Soil Health. Presented at the International forum on no-till and sustainable agriculture. Agro-Soyuz-Ukraine, Synelinkova district, Dnipropetrovsk region, Ukraine, June 19-21, 2013.
- Islam, K.R., Y. Raut, R. Shrestha, and R. Lal (2008) Climate change and soil C sequestration potential in south-east Asia. International Symp. on Global Climate Change and Food Security in South-Asia. Dhaka, Bangladesh. August 2008.
- Mandol, D. and Islam, K.R. (2010) Soil carbon sequestration under rubber plantations in northeast India. Paper presented at the International Symp. on Global Climate Change and Food Security in South-Asia. Dhaka, Bangladesh. August 2008.
- Ahsan, S., Ali, M.S., Hoque, M.R., Osman, M.S., Rahman, M., Babar, M.J., Begum, S.A., Rahman, D.M., and K.R. Islam (2010) Agricultural and environmental changes in Bangladesh in response to global warming. Intern. Symp. on Global Climate Change and Food Security in South-Asia. Dhaka, Bangladesh. Aug 2008
- Islam, K.R., Bakhodir, Q., Ibragim, G., Iroda, R., and Botir, H (2007) Agricultural problems in Central Asia. Invited speaker on research and educational directives at the Samarkand Agricultural Institute. Uzbekistan.
- Islam, K.R., Bakhodir, Q., Ibragim, G., Iroda, R., and Botir, H (2006) Linking research, teaching, and extension programs. Invited speaker on research and educational directives at the Tashkent State Agrarian University. Uzbekistan.
- Islam, K.R., Bakhodir, Q., Ibragim, G., Iroda, R., and Botir, H (2005) Agro-economy and climate change in Central Asia. Invited speaker for USDA-FAS on research and educational directives, Tashkent State University of Economics, Uzbekistan.

Extension presentations

- Islam, K.R. (2020) Climate-Smart Organic Vegetables for Healthy Soils, Healthy Food, and Healthy People. Ohio Ecological Food and farm Association Annual Conference, Feb. 14, Dayton Conventional Center, Ohio, USA.
- Islam, K.R. (2020) Climate-Smart Organic Grains for Healthy Soils, Healthy Food, and Healthy People. Ohio Ecological Food and farm Association Annual Conference, Feb. 14, Dayton Conventional Center, Ohio, USA.

- Islam, K.R. (2020) 21st Century Climate-Smart Agriculture. In: Building Agricultural Resilience to a Changing Climate – a preconference session. Ohio Ecological Food and farm Association Annual Conference, February 13, Dayton Conventional Center, Ohio, USA.
- Brad Bergefurd, Rafiq Islam, Thomas Harker, and Wayne Lewis (2020) Aspirin (salicylic acid) Effects on Economic Production of Pumpkin and Tomatoes. Ohio Vegetables and Small Fruit Research and Development Program Annual Meeting, Columbus, Ohio, Jan 22.
- Islam, K.R. (2019) Healthy soils, healthy food, and healthy people. CTTC Annual Meetings, Ada, OH. March.
- Islam, K.R. (2018) Rethinking Agriculture in the 21st Century: Growing Healthy Food with One Health Vision. Plenary Session of the Ohio One Health Symposium, Drake Performance and Event Center, Ohio State University, Columbus, Nov 1-2.
- Islam, K.R. (2018) Soil quality test – Active carbon. Ohio No-Till Field Day, Wooster, Ohio, August 29.
- Islam, K.R. and A. P. Sundermeier (2018) Measuring soil health characteristics. In Healthy Soils for Healthy Waters session, CTTC Annual Meetings, Ada, OH.
- Islam, K.R. (2017) Ohio State University Soil health test service. Farm Science Review, Molly Caren, London, Ohio, September.
- Islam, K.R. (2017) Soil health analysis, interpretation & management recommendations. Wood County Soil Health Field Day, Bowling Green, Ohio, August 31.
- Islam, K.R. (2017) OSU soil health assessment package. Presented at CTTC, Ohio Northern University, Ada, March 8, 2017.
- Islam, K.R. (2017) Soluble reactive phosphorus; soil sorption, storage, and release. CTTC, Ohio Northern University, Ada, March 8, 2017.
- Islam, K.R., Yogi Raut, Lindsey Kilpatrick, Randall Reeder, and Fred Michel (2017) Growing Miscanthus for biofuels on marginal land amended with sewage sludge and flue gas desulfurized gypsum. FAFE Dept. Ohio State University, February.
- Islam, K.R. (2016) Cropping Diversity Improves No-till Soil Quality, Crop Productivity and Water Quality. Presented at CTTC annual meetings, March 22, 2016.
- Islam, K.R. and Rob Cain (2015) Possible Solutions for Phosphorus Pollution from Farms. Presented at the “Solving the phosphorus (and nitrogen) pollution” session of the Conservation Tillage & Technology Conference annual meetings, March 4, 2015.
- Islam, K.R. and Reeder R (2014) Bioenergy feedstock production and greenhouse gas emissions. Presentation delivered at the NE SunGrant funded train the trainer’s workshop. W.K. Kellogg Biological Station, Michigan State University, Hickory Corners, MI., August 29, 2014.
- Islam K.R. (2014) SARE Grant Project # ENC 118: Training professionals on sustainable agriculture for enhanced ecosystem services from the ground up. Granville, OH, OEFFA Annual Meeting for NCR-SARE’s Farmers Forum, February 15, 2014.
- Islam KR (2014) Use of Cover Crop Cocktail Mix to Sustain Organic Production. OEFFA Annual Meeting, Granville, OH. Feb 15, 2014.
- Islam, K.R., Ekrem Aksakal and Dave Brandt (2013) Mixed Cover Crop Effects on No-Till Soil Properties. CTTC Annual Meetings, Ada, Ohio, March 5 and 6.
- Islam K.R. (2013) Climate Change and 21st Century Agriculture. CTTC Annual Meetings, Ada, Ohio, March 5 and 6.

- Randall Reeder, Ekrem Aksakal, and K.R. Islam (2013) Controlled Traffic and Soil Compaction. CTTC Annual Meetings, Ada, Ohio, March 5 and 6.
- Islam, K.R., Ekrem Aksakal and Dave Brandt (2013) Cover Crop Impact on Chemical and Physical Properties of No-till Soil. Agriculture's Innovative Minds (AIM) Symposium, Salina, KS, January 31, 2013.
- Islam, K.R. (2012) Training professionals on sustainable agriculture for enhanced ecosystem services from the ground up. Presented NCR SARE PDP Project Coordinator Meeting. Kansas City, MO.
- Islam K.R. and Ekrem Aksakal (2012) Soil Quality, Climate and Carbon – 21st Century Agriculture. Fulton County Cover Crop/Soil Quality Field Day, Ohio, Nov. 14, 2012.
- Islam K.R. (2012) Cover crops & zeolite: Effect on N & P cycling. CTTC, Ada, Mar 3-4.
- Islam K.R. 2010. Using cover crops to improve soil productivity. Granville, OH, Feb. 13.
- Islam K.R. 2010. Nutrient Benefits from Cover Crops. CTTC, Ada, Ohio, Feb 20-21.
- Islam K.R. (2010) Fundamentals of Landscape Soils. OSU Extension Meeting, Summit County, Richfield, Feb 5.
- Islam K.R. (2009) Fundamentals of cover crops & soil quality. CTTC, Ada, Feb 20-21.
- Islam K.R. (2009) Using Cover Crops to Produce Home Grown Nitrogen. CTTC, Ada, Ohio, Feb 20-21.
- Islam K.R. (2009) Cover Crops: The Biological Plow. CTTC, Ada, Ohio, Feb 20-21.
- Islam K.R. (2010) Using Cover crops to Improve Soil Productivity. Ohio Ecological Food and Farm Association Annual Conference Workshops, February 13, 2010
- Islam, K.R. (2008) Selecting cover crops. Ohio No-till Council conference. Plain City, OH. December 09, 2008.
- Islam, K.R. (2008) Cover crops: Research and On-farm results. Conservation Tillage and Technology Center, Ada, OH. February 20, 2008.
- Lewis, W. and Islam, K.R. (2008) Slow-Release N Fertilizer: Leaching Studies. Conservation Tillage and Technology Conference, Ada, OH. February 20, 2008.
- Hoorman, J., and Islam, K. R. 2007. Soil Organic Matter Nutrient Recycling with Cover Crops and Manure, 2007 Indiana CCA meeting, Indianapolis, IN, Dec 19, 2007.
- Hoorman, J., and Islam, K. R. 2007. Using Winter Cover Crops to Prevent Manure Nitrogen Losses and Hypoxia, Hypoxia in the Mississippi River Conf., Springfield, Illinois, June 25, 2007.
- Sundermeier, A. P., Clevenger, W. B., and Islam, K. R. 2007. Proceedings. Soil Quality Workshop. The Ohio State University. August.
- Islam, K.R. (2007). Cover crops for vegetables production. Warren County Extension Small Fruits and Vegetables Production. South Lebanon, Ohio.
- Islam, K.R. (2007). Benefits of cover crops: N fertilization and soil quality. Warren county Soil and Water Conservation District, Waynesville, Ohio.
- Hoorman, J. and K.R. Islam (2007) Cover crops and organic matter. CTTC, Ada, Ohio.
- Islam K.R (2006) Cover crops for nutrient management. CTTC, Ohio Northern University.
- Islam K.R. (2006) Organic Matter benefits for soil productivity. Conservation Tillage & Technology Conference, Ohio Northern University.
- Islam K.R. (2006) Cover crops effect on no-till vegetables production. Ohio Small Fruit and Vegetables Production Convention. Columbus, OH.
- Islam K. R. (2005) Prospects of ethnic crops. Paper presented at the 2nd Annual Tri-State Diversity Conf. on Experience the diversity of food: Production through

- consumption. Ohio State University, Kentucky State University, Purdue University, and University of Kentucky. Cincinnati, Ohio.
- Islam K.R. and S.R. Wright. 2005. Blueberry production in response to N fertilization and soil drainage. Ohio Small Fruits and Vegetable Growers Cong. Toledo, OH.
- Islam K.R. (2004) Soil quality field test. Conservation tillage and technology conference. February 26-27. Ohio Northern University, Ohio.
- Islam K.R. (2004) Active organic matter and soil quality talk. Tri-county Field Day, Lancaster, August 2004
- Islam K.R. (2004) Radio talk show on sustainable agriculture/field night, Chillicothe WBX50, June 17, 2004.
- Islam K.R. (2004) Mother Earth focus on annual celebration. Chillicothe Earth Day, April 24
- Islam K.R. (2004) N fertilization and soil management for sustainable production of blueberries in Southern Ohio. Horticulture Field night, Piketon, August 2004
- Islam K.R. (2004) Cover crops, T-22 and N fertilization. Soil and Water Resources Field Night, Piketon, July.
- Wright. S.R., Christie Welch, Lynn Miller, Al Welch, K. R Islam, and Richard C. Funt (2003) Black Raspberry Cultivar Study. OSFV Growers Congress. Toledo, OH.
- Islam K.R. (2004) Testing active organic C as a simple measure of soil quality. Talk given School of Natural Resources, Ohio State University, Columbus, Oct. 2003.
- Islam K.R. (2003) Soil quality field test. Farm Science Review. OSU Molly's Green, London, OH. July 2003.
- Islam K.R. (2003) N fertilization and soil drainage effects on blueberries production. Berry School. OSU South Centers, Piketon OH. March 2003
- Islam (K. R. 2003) Production and economics of ethnic vegetable crops. Athens County Extension and Farmers Market. March 13th, 2003.
- Islam K.R. (2003) A simple field test of soil quality. Annual Crop Production Meeting. Widmer and Associates Ltd., Fremont, OH. February 2003.
- Islam K.R. (2003) Greenhouse effects on C sequestration and phytoremediation of Brownfield's. Scioto Valley Section of the Amer Soc. of Quality, Ohio. Feb. 2003.
- Islam K.R. (2003) Soil and water research opportunities and collaboration with OSU South District Extension Specialists and Agents. OSU South Centers, OH. 2003.
- Islam K.R. (2003) Soil quality criteria: How does the new soil organic matter test work? Bulk density and soil porosity considerations. Soil and Water Issues for Agronomy Professionals and Certified Crop Advisors. Newark Campus/OSUN/ COTC, 2002.
- Islam K.R. (2003) Soil Testing. Science Section. Manchester Ave Tent. Middfest International 20 years/25 Country celebration. Middleton, OH. October 4-6, 2002.

MODERATION/ORGANIZATION OF PROFESSIONAL MEETINGS/WORKSHOPS

- Soil Carbon Farming for Climate Change Solutions - A Symposium. SSSA Division: Soil and Water Management and Conservation. ASA/CSA/SSSA International Meetings, Phoenix, AZ, Nov. 8-10, 2020 (to be organized).
- Building Agricultural Resilience to a Changing Climate - A Climate for Change. Preconference workshop at the Ohio Ecological Food and Farm Association (OEFFA) Annual Conference. Dayton Conventional Center, Feb 13, 2020.

Climate-Smart Organic Grains and Vegetables for Healthy Soils, Healthy Food, and Healthy People. Workshop at the Ohio Ecological Food and Farm Association (OEFFA) Annual Conference, Dayton Conventional Center, Feb 14., 2020.

One Health Vision, Healthy Soils, Healthy Food, Healthy People (Oral and poster): SSSA Division: Soil and Water Management and Conservation. American Society of Agronomy/Crop Science Society of America/Soil Science Society of America International Annual Meeting, Nov. 10-13, San Antonio, Texas, USA.

Agricultural Renaissance and Soil Health I and II (Oral and poster). SSSA Division: Soil and Water Management and Conservation. American Society of Agronomy/Crop Science Society of America/Soil Science Society of America International Annual Meeting, San Diego, CA. Jan 2019.

Advanced Soil Health Systems for Farmers and NRCS Professionals. Wenning Farms, Greensburg and Brocksmith Farms, Vincennes, IN. July 24 to 26, 2018.

Soil Health Assessment and Tool Session, SSSA Division: Soil and Water Management and Conservation, ASA/CSA/SSSA Meetings, Tampa, Florida, October 25, 2017.

Climate change, sustainable agriculture and soil health workshop". A series of 5 workshops in France. Sponsored by Biodiversite, Agriculture, Soil & Environment (WWW.ASSO-BASE.FR), Soir de la Terre/Ohio State Univ., March 11-18, 2017.

Sustainable Bioenergy Cropping Systems "Train the trainer" workshop. Ohio State University, Columbus, OH. Sponsored by NE SunGrant Initiatives/Ohio State University, April 9, 2015.

Sustainable Bioenergy Cropping Systems "Train the trainer" workshop. University of Maryland, College Park, MD. Sponsored by NE SunGrant Initiatives/Ohio State University, March 25, 2015.

Sustainable Bioenergy Cropping Systems "Train the trainer" workshop. Conservation Tillage and Technology Conference Annual Meetings, Ohio Northern University, Ada, Ohio, Sponsored by SunGrant Initiatives/Ohio State Univ., March 2-3, 2015.

Sustainable Bioenergy Cropping Systems "Train the trainer" workshop. W.K. Kellogg Biological Station, Michigan State University, Hickory Corners, MI., Sponsored NE SunGrant Initiatives/Ohio State University, August 29, 2014.

Ohio Ecological Food & Farm Association (OEFFA) Pre-workshop on "Eco-farming, Biodiversity and Soil health: A systems approach to enhance organic and natural agroecosystem services", Granville, OH, Feb 14, 2014.

Sustainable agriculture and soil health workshop, NC SARE, Ohio State University and Michigan NRCS, Clarksville, Gaylord and Owosso, October 28 to 30, 2013.

Soil Health & Cover Crop Workshop. The Ohio State University South Centers, OSU Extension-Scioto County, Scioto Soil and Water Conservation District, and Lawrence Soil & Water Conservation District. OSU South Centers, June 8, 2013.

Sustainable agriculture and soil health workshop, NC SARE, Ohio State University and Illinois NRCS, Mt. Vernon, Springfield and Sycamore, IL, May 14-16, 2013.

Bio-Energy Workshop: Understanding Energy Policy, Bio-Crop Production, & Market Development. Ohio State University South Centers at Piketon, April 8, 2013

Sustainable agriculture and soil health workshop, NC SARE, Ohio State University, and Conservation Tillage & Technology Conference, Ada, Ohio, March 5 and 6, 2013.

Soil-Machine Interaction in Tillage, Planting and Harvesting, and 21st Century Agriculture. John Deere Prof. Workshop for Engineers, Moline, IL and Ankeny IA, July 2-3.

Soil-Machine Interaction in Tillage, Planting and Harvesting, and 21st Century Agriculture.
 John Deere Professional Workshop for Engineers, Des Moines, IA, June 4-5, 2012
 Soil quality workshop, Sponsored by NC SARE/OSU/Univ. Minnesota. Ada, OH, 2012.
 Fulton County Cover Crop and Soil Quality Field Day, Ohio, Nov.14, 2012
 Carbon, Energy & Climate Conference, NC SARE and Michigan University, WK Kellogg
 Biological Station, Hickory Corners, MI, Sep. 26 to 28, 2012.
 ECO Farming and Soil Quality Workshop: A systems approach to enhance
 agroecosystem services. 67th International Annual Conference of the Soil and
 Water Conservation Society, Ft. Worth, Texas, July 22, 2012.
 Soil quality workshop, Sponsored by NC SARE/OSU/Univ. Minnesota. Morris and
 Waseca, MN, September 2011.
 Impact of C³ (Crop Rotation, Cover Crops, and Conservation Tillage) on Soil Quality, I
 and II, S06 Soil & Water Management & Conservation, ASA-CSA-SSA
 International Meetings, San Antonio, TX, October 16-19, 2011.
 Sustainable agriculture & ecosystem services: Role of conservation tillage, crop rotation,
 and nutrient management: I and II, ASA-CSA-SSA Meetings, Oct 31– Nov 4.
 Served as a moderator for Cover crops and nutrient management session of Ohio Small
 Fruit and Vegetables Production Convention, January 16 to 18, 2006
 Cover Crops and Soil Productivity for Sustainable Production of Vegetables. Ohio
 Ecological Food and Farm Assoc. Annual Conf., Workshops, February 10, 2005.
 Southern Ohio Ginseng Conference (Cultivation, Ecology & Marketing of American
 Ginseng) at the OSU South Centers at Piketon/Rural Action. October 19, 2002.

PROFESSIONAL DEVELOPMENT/TRAINING

ASA/CSA/SSSA International Meetings, Phoenix, AZ, Nov. 8-10, 2020 (to be organized).
 Conservation Tillage and Technology Conference (CTTC), Ada, Ohio, March 2020.
 Ohio Vegetables and Small Fruit Research and Development Program Annual Meeting,
 Columbus, Jan 22, 2020.
 ASA/CSA/SSSA International Meetings, San Antonio, TX, November 2019
 SSSA International Soils Meeting, San Diego, January 2019.
 Conservation Tillage and Technology Conference (CTTC), Ada, Ohio, 2019
 Soil and Water Conservation District Annual Meetings, Toledo, OH 2018.
 Conservation Tillage and Technology Conference (CTTC), Ada, Ohio, 2017
 ASA/CSA/SSSA International Meetings, Tampa, FL 2017
 Conservation Tillage and Technology Conference (CTTC), Ada, Ohio, 2016
 ASA/CSA/SSSA International Meetings, Minneapolis, MN 2016
 Conservation Tillage and Technology Conference (CTTC), Ada, Ohio, 2015
 ASA/CSA/SSSA International Meetings, Riverside, CA 2015
 Bell Aquaculture Ideation Session, Licensing and Technology Dept., The Ohio State
 University, Columbus, OH. June 23, 2014.
 Ohio Agricultural Research Development Center Annual Res. Meetings, March 2014.
 Organic Food & Farming Education & Research Program (OFFER) Meetings, Ohio State
 University, Bowling Green, Ohio. April 2014.
 Conservation Tillage and Technology Conference (CTTC), Ada, Ohio, March 2014.
 National Conference on Cover Crops and Soil Health, Omaha, NE. Sponsored by NCR
 SARE, USDA NRCS, and Howard Buffet Foundation, February 2014.

Ohio Ecological Food and Farm Associations Annual Meetings. Granville, OH. Feb 2014
 ASA/SSSA/CSA International Meetings, Tampa, FL, November 2013.
 World Food Prize Award Meetings, Des Moines, October 2013-2017.
 International forum on sustainable agriculture. Sponsored by Agro-Soyuz-Ukraine model agricultural enterprise, Dnipropetrovsk region, Ukraine, June 19 to 21st, 2013.
 3rd Annual Midwest Soil Improvement Symposium. Gypsoil, Ohio State University and CTIC, March 7, 2013.
 Conservation Tillage and Technology Conference, Ada, Ohio, March 8 and 9, 2013.
 Midwest Cover Crops Council Annual Meetings, London, Canada, March 1 & 2, 2013.
 AIM symposium: The use of biological primers to advance soil health. Jan 31, 2013.
 17th Annual Winter Conf. of the No-till of the Plains. Salina, KS, Jan 29 to 30, 2013.
 Conservation Tillage and Technology Conference (CTTC), Ada, Ohio, 2012.
 ASA/SSSA/CSA International Meetings, Cincinnati, OH, 2012
 Ohio State University Extension Annual Meetings, Columbus, OH, 2002 – 2012
 Ohio No-Till Conference, Plain City, OH, 2012
 Conservation Tillage and Technology Conference (CTTC), Ada, Ohio, 2011.
 Ohio No-Till Conference, Plain City, OH, 2011
 ASA/SSSA/CSA International Meetings Long Beach California, 2011
 National No-Till Conference, Cincinnati, OH, 1/13/2011
 Conservation Tillage and Technology Conference (CTTC), Ada, Ohio, 2010.
 Ohio polymer industry strategy meeting. Ohio Polymer Strategy Council, Westerville, December 8, 2010.
 ASA-CSA-SSA International Meetings, October 31 – Nov 4, Long Beach, Ca. 2010
 Advanced energy meeting. TechGrowth, Ohio University, Athens, October 10, 2010
 Ohio Ecological Food and Farm Association (OEFA) Annual Conference Workshops, February 13, 2010
 Ohio No-Till Council Conference, Plain City, OH, 2010
 Conservation Tillage and Technology Conference (CTTC), Ada, Ohio, 2009.
 Ohio No-Till Conference, Plain City, OH, 2009
 ASA-CSA-SSSA International Meetings, Pittsburg, PA. 2009
 Midwest Cover Crops Conf., Windsor, Canada, April 2009.
 International Conference on “Climate Change and Food Security in South Asia”, Dhaka, Bangladesh, 25-30 August 2008. Ohio State University, WMO, FAO, ESCAP, University of Dhaka, and the Government of Bangladesh. 2008
 Conservation Tillage and Technology Conference (CTTC), Ada, Ohio, 2008.
 ASA-CSA-SSSA International Meetings, Houston, TX. 2008
 Renewable Energy Workshop. OARDC/OSU. Nov. 12, 2008.
 Renewable Energy Policy at 25 x 25 Conference. OFBF Self-Help Energy Programs. Nov. 21, 2008.
 Ohio No-Till Council Conference, Plain City, OH, 2008
 Midwest Cover Crop Conf., Indianapolis, IN. April 2008.
 Multi-state soil quality workshop at Bowling Green/Wooster, OH, August 2007
 Soil quality workshop for OSU Extension Educators, OSU Extension Annual Meeting, Cherry Hill, OH, Dec. 2007
 Midwest Cover Crop Strategic Meeting. Minneapolis, MN, April 10 – 11, 2007.
 Conservation Tillage and Technology Conference, Ada, Ohio, 2007.

Ohio No-Till Conference, Plain City, OH, 2007
 Ohio No-Till Conference, Plain City, OH, 2006
 Conservation Tillage and Technology Conference (CTTC), Ada, Ohio, 2006.
 Ohio Small Fruit and Vegetables Production Convention, January 16 to 18, 2006
 American Society of Agronomy/Crop Science Society of America/Soil Science Society of America Meetings, Indianapolis, Indiana, Nov. 12-16, 2006.
 Cover Crop Summit – Innovations in Cover Crops and Perenniality. Michigan State University, Augusta, Michigan, August 2-3, 2006
 18th World Congress of Soil Science, Philadelphia, PA, USA, July 9-15, 2006
 Sustainable crops, soil, and water management practices for improving environmental quality in Central Asia. Tashkent State Agrarian University, Tashkent State Irrigation and Amelioration Institute, Tashkent State University of Economics, Land Institute/Samarkand Agriculture Institute, Uzbekistan. March 19 – April 5, 2006
 Ohio Small Fruit and Vegetables Production Convention, January 16-18, 2006
 Ohio Ecological Food and Farm Association Annual Conference, February 10, 2005.
 Conservation Tillage and Technology Conference (CTTC), Ada, Ohio, 2005.
 Second Annual Tri-State Diversity Conference on Experience the diversity of food: Production through consumption. Cincinnati, Ohio. Organized by the Ohio State University, Kentucky State University, Purdue University, and University of Kentucky. November 17-18, 2005
 Sustainable soil and water management practices for improving environmental quality in Uzbekistan. Tashkent State Irrigation and Amelioration Institute, Tashkent State Agrarian University, Tashkent State University of Economics, and Samarkand Agriculture Institute, Uzbekistan. March 3 – 17, 2005.
 Carbon sequestration in Central Asia. Ohio State Univ., Columbus, Ohio. 2-4 Nov 2005.
 USDA-CSREES Grantsmanship Workshop. Washington, DC. September 2005.
 Third USDA symposium on greenhouse gases and carbon sequestration in agriculture and forestry. Baltimore, March 21-24, 2005
 Ohio No-Till Council Conference, Plain City, OH, 2005
 Conservation Tillage and Technology Conference (CTTC), Ada, Ohio, 2004.
 American Society of Agronomy Meetings. Seattle, WA, October-November 2004
 American Society of Agronomy Meetings. Denver, CO, November 2003.
 International Workshop on Impact of Climate Change on Agriculture: Challenges and Strategies. Univ. Arid Agriculture, Rawalpindi, Pakistan. August 27-30, 2003.
 Midwest Conservation Tillage Conference. Wooster, OH. June 5-6, 2003.
 USDA Symp. Natural Res. Manage. Offset GHG Emissions. Raleigh, NC. Nov. 19-21, 2002.
 American Society of Agronomy Meetings. Indianapolis, IN. Nov 2002.
 22nd Annual Central States Forest Soils Workshop. Toledo, Ohio. October 2002.
 USDA-SARE Professional Development Program/Rural Action Forestry Program sponsored Special Forest Products workshop. Jackson, Ohio. May 2002.
 Southern Ohio Ginseng Conference (Cultivation, Ecology & Marketing of American Ginseng) at the OSU South Centers at Piketon/Rural Action. October 19, 2002.
 American Society of Agronomy Meetings. Charlotte, NC, October 2001.
 Optimizing N management in food and energy production and environmental protection, The 2nd International N Conference, Potomac, MD, October 2001.
 American Society of Agronomy Meetings, Minneapolis, MN, November 2000.

Northeast Branch of ASA Meetings, University of Delaware, Delaware, June 2000.
 American Society of Agronomy Meetings, Salt Lake City, UT, November 1999.
 American Society of Agronomy Meetings, Baltimore, MD, November 1998.
 XII FOBANA Conference, New York, 1998.
 NE Branch Amer. Society Agronomy Meetings, Univ. Maryland. MD, June 1997.
 American Society of Agronomy Meetings, Anaheim, CA, November 1997.
 American Society of Agronomy Meetings, St. Louis, MO, November 1996.
 Clay Minerals Society Meetings, Baltimore, MD, 1995.
 American Society of Agronomy Meetings, Cincinnati, OH, November 1993.
 Intern. Symp. on "Biological N-fixation associated with rice production. Cuttack, India. 1988.

CITATION AND REGOGNITION

Climate change, Sustainable agriculture and soil health workshop information in <http://www.entraid.com/articles/augmenter-matiere-organique-stocker-plus-de-carbone>. March 2017.

Tool calculates soil health. News article written by Gail Keck. Ohio Farmer (www.FARMPROGRESS.COM), p. 32, Feb. 2014

New Tool offers Growers Easy Option to Measure Soil Organic Matter Content. News article written by Tracy Turner, OSU Communications. March 6, 2014.

Ohio State Team Promotes Nature-based 'ECO-farming' News article, February 2014.

Energy Farming? Bioenergy Crops Workshop Set for April 8 in Piketon. News article written by Mauricio Espinoza in OARDC Newsletter, March 2013.

Salvation in the soil. Article written Seth Teter, Ohio Magazine, Jan-Feb. 2013 (<http://ourohio.org>).

Home-grown nitrogen – Cover crops can be a source of more affordable N. News article written by Larry Reichenberger, Furrow January 2008.

Soil quality tools. News article written by Gail Keck, Ohio Farmer (www.OhioFarmer.com) October 2007.

Worried about high fuel costs? Grow cover crops for your fertilizer needs. Ohio State Agriculture. News article written by Candice Pollock and posted on the Ohio State Agriculture, Vol. 16, Issue 2, summer 2007.

Vinegar as an alternate herbicide for organic vegetable production. Ohio Online, 2005

Phytoremediation. Ohio's County Journal, 2005.

Cool cover crops: Old favorites and exotic new varieties provide economic and environmental boost. Dean Houghton, The Furrow (John Deere), winter 2004

Field research. Julie Billings, The Pike County News Watchman, August 8, 2004.

Nitrogen project at OSU South Centers underway. News article written by Mayela Espinoza, The Pike County News Watchman, June 27, 2004.

N for the long haul: Time-released urea offers safe N source for corn growers. Article written by Dean Houghton, Editor, The Furrow. John Deere, spring 2004.

A taste of diversity: Spice up your garden with the unique look and taste of Asian vegetables. Dean Houghton, The Furrow. John Deere, spring 2004.

New test checks soil quality. News article written by Candice Pollock and posted on the Ohio State Agriculture, Winter Vol. 11, Issue 3. 2003-2004

Quick test for carbon. News article written by Tim White, Ohio Farmer. November 2004.

Spicing up Ohio's veggie market with exotic crops. Candice Pollock, Country Living, 45 (9): 16, 2003.

New test for soil quality. News article written by Matt Reese, Ohio's Country Journal, September 2003, p. 21.

Spicing up Ohio's veggie market with exotic crops. News article written by Candice Pollock and posted on Ohio line. October 7, 2002.

New test simplifies soil quality assessment. News article written by Candice Pollock and posted on Ohio line and OSU website. July 1, 2002.

Ginseng may be a lucrative specialty crop. Online News article. July 1, 2002.

PROFESSIONAL SERVICE

Academic, Research and Extension Committees

Member, Graduate studies committee, Environment and Natural Resources

Member, Ohio Sustainable Agriculture Team.

Member, Midwest Cover Crop Council.

Editorial Service

Academic Editor (Soil), PLOS ONE

Editorial Board Member, ISRN Agronomy Journal

Editorial Board Member, Journal of Agriculture Food and Development (JAFD)

Editorial Board Member, Botanical Research and Applications

Board of Directors

Conservation Tillage and Technology Conference

Ohio No-Till Council

Technical Review Committee Member

U.S. National Academies of Sciences, Engineering, and Medicine, 2015-2020.

USDA Borlaug Young Scholar Program, World Food Prize, 2013 – 2020

Nelson Mandela-Washington Fellowship 2016-2020.

Fulbright Senior Research Fellowship 2020.

NCR SARE Research and Extension, 2014-2016.

Mentor/supervisor

USDA-Borlaug Fellowship 2010 – 2019.

USDA-Borlaug LEAP Fellowship 2017

Nelson Mandela-Washington Fellowship 2016-2018.

Peer-reviewed Journal/Proposal Reviewer

Agronomy Journal, Crop Science, HortTchnology, Journal of Environmental Management, Journal of Environmental Quality, Renewable Agriculture and Food Systems, Soil Science Society of America Journal, Soil and Tillage Research, Soil and Water Conservation.

African Journal of Biotechnology, Applied Geography, Australian Journal of Botany, Bangladesh Journal of Agriculture, Bangladesh Journal of Soil Science, Canadian Journal of Crop Science, Dhaka University Studies (Biological Sciences), International Journal of Tropical Agriculture, Journal of Agricultural Research, Journal

of the Indian Society of Soil Science, Pakistan Journal of Agriculture, Pakistan Journal of Botany, PLOS ONE, Pedosphere, Soil and Environment.

Federal/Research Organizations

- Department of Energy
- Environmental Protection Agency
- National Science Foundation
- USAID's Middle East Regional Cooperation (MERC) Program
- USDA-ARS and Foreign Agriculture Service
- US-State Department
- Ohio Agricultural Research and Development Center (OARDC)
- University of Wyoming Agricultural Experiment Station Competitive Grant
- Kansas State University.
- National Academies of Sciences/National Research Council

Examiner for M.S/Ph.D. dissertation

- Dmitriy Maksimov (2018) The productivity and quality of haricot beans depending on soil tillage, mineral fertilizers, and row width under irrigation. M.S./Ph.D. thesis, Kherson State Agricultural University, Kherson, Ukraine.
- Natasha Didenko (2018) Investigation of soybean productivity depending on the main cultivation of soil in the south of Ukraine. M.S. thesis, Kherson State Agricultural University, Kherson, Ukraine.
- Fazliddin Namozov (2016) Developing of short, sequenced cropping systems to improve soil fertility and cotton yield (In conditions of typical Sierozem soils of the Tashkent region)". Ph.D. thesis. Scientific Non-recurrent Council of Cotton Breeding, Seed Production and Agrotechnologies Research Institute, Tashkent, Uzbekistan.
- Imdad Ullah Khan (2016) Heavy metals and pathogens pollution of soils and crops irrigated with domestic wastewater. Dept. Soil and Environmental Sciences, Faculty of Agriculture, Gomal University, Dera Ismail Khan, KPK, Pakistan.
- Waqar-Un-Nisa (2015) Polycyclic aromatic hydrocarbon sequestration by soil organic matter fractions and its effects on plant growth. Department of Environmental Sciences, Pir Mehr Ali Shah Arid Agriculture University Rawalpindi (Pakistan).
- Anne Dulcie Williams (2013) Biological indicators and potential amendments to improve soil health, crop productivity and profitability for cropping soils in Central West NSW Australia. Dept. of Soil Science, University of New England, Australia.
- Ikhtiar-ud-Din (2013) Assessment of polycyclic aromatic hydrocarbon levels in serum and urine of petroleum associated workers. Dept. of Environmental Science, PM Arid Agricultural University, Rawalpindi, Pakistan
- Fakhra Shamim (2012) Relative physiological and biochemical evaluation of some tomato (*Lycopersicon esculentum*, L.) genotypes under water deficit conditions. Department of Botany, PM Arid Agricultural University, Rawalpindi, Pakistan.
- Zahangir Khan, (2006) Test of AB-DTPA as routine measures of soil extractable phosphorus and potassium for crop fertilization. Dept. of Soil Science and Soil and Water Conservation, PM Arid Agricultural University, Rawalpindi, Pakistan.
- Tahir Hussain Chatta, (2005) Phosphorus adsorption and crop fertilization. Dept. of Soil Science, and Soil and Water Cons. PM Arid Agricultural University, Pakistan.

Consultation/Service Provided

Provide soil quality/soil health analytical services for Michigan State University, University of Minnesota, University of California-Davis, USDA-ARS Indiana, USDA-ARS Alabama, USDA-NRCS, Ohio EPA, and Ohio ODNR. 2016-2019.

Wrote a professional course curriculum on “Sustainable agriculture, soil health and ecosystem services” for SARE PDP train the trainer program, 2012.

Wrote a professional and intensive course curriculum on Brownfield’s Remediation for Civic Works (An Aerators program), Baltimore, MD. 2001.

Supervised soil quality properties of major soil series of the State of Pennsylvania for Natural Resources Conservation Service, PA. 1999.

Analyzed soil quality properties, performed soil organic matter fractionation, active C, and soil microbial biomass C analyses under management practices for DuPont’s Sustainable Agricultural Project, Eastern Shore, MD. 1991-1993.

Other services

Served as judge for the Ohio Academy of Science, State Science Day, May 11, 2019.

Served as a reviewer for Ohio Academy of Sciences 2018.

Served as an examiner/judge to select Young Borlaug Scholar, 2013 – 2020

Served as a judge for Pike County Science fair. 2002 to 2012.

Certification and recognition

Certificate of appreciation to serve NCR-SARE Technical Committee member, 2016.

Certificate of appreciation for contributions, commitment, and general support of the Office of Multi-Ethnic Student Education Mentoring Program, 1996 to 1997.

PROMOTION AND TENURE COMMITTEES

Dr. Mushtaq Hussain Lashari, Dept. of Life Sciences, The Islamia University of Bahawalpur, Pakistan. External expert evaluation for Assistant professor to Associate Professorship. 2018.

Dr. Azeem Khalid, Chairman, Dept. of Environmental Sciences, Pir Mehr Ali Shah Arid Agriculture University Rawalpindi (Pakistan). External expert evaluation for Associate professor to Professorship. 2016.

Dr. Arundhuti Devi’s, Institute of Advanced Study in Science and Technology Paschim Boragaon, Garchuk, Guwahati-781035, Assam, India. External expert for Assistant professor to Associate Professor-I. 2015.

PROFESSIONAL HONOR SOCIETY AND ORGANIZATIONAL MEMBERSHIPS

American Society of Agronomy/Crop Science/Soil Science

Association of Ohio Pedologists

International Society of Soil Science

Soil and Water Conservation Society

Gamma, Sigma and Delta

Alumni, University of Maryland

Alumni, Asian Institute of Technology, Thailand

Alumni, Dhaka University, Bangladesh.