

**Javed Iqbal, Ph.D.**

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**Education:**

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| 2006-2009 | <b>Ph.D.</b> Soil Science, Huazhong Agriculture University, Wuhan, China   |
| 2004-2006 | <b>M.Sc.</b> Soil Science, University of Agriculture, Faisalabad, Pakistan |
| 2000-2004 | <b>B.Sc.</b> Soil Science, University of Agriculture, Faisalabad, Pakistan |

**Professional Experience:**

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| 2019-present | Assistant Professor, Department of Agronomy and Horticulture, University of Nebraska-Lincoln, Lincoln NE, USA                                  |
| 2016-2019    | Research Soil Scientist, Sustainable Agroecosystems Group, Department of Agronomy, Iowa State University, Ames IA, USA                         |
| 2011-2016    | Post-doctoral Research Scientist, Sustainable Agroecosystems Group, Department of Agronomy, Iowa State University, Ames IA, USA                |
| 2009-2011    | Post-doctoral Research Scholar, Grassland Ecology Laboratory, Department of Plant and Soil Sciences, University of Kentucky, Lexington KY, USA |
| 2006-2009    | Graduate Research Assistant, College of Resources and Environment, Huazhong Agriculture University, Wuhan, China                               |

**Honors:**

- Excellence in Ph.D. Dissertation award 2009. Huazhong Agricultural University (HZAU), China.
- Excellence in Provincial Ph.D. Dissertation award 2009. Hubei province, China.
- National Excellence in Ph.D. Dissertation Nomination Prize 2010. Huazhong Agricultural University.
- Ph.D. Fellowship 2006-2009. Ministry of Education, Pakistan and Chinese Scholarship Council, China.

## Teaching Experience:

- 2013-2015 Undergraduate teaching for Agron-154: *Fundamentals of Soil Science*, Iowa State University, Department of Agronomy.
- 2013-2015 Undergraduate teaching for Agron-155: *Soils for Horticultural Scientists*, Iowa State University, Department of Agronomy.

## Certifications:

- 2015-2017 Certified Crop Advisor (CCA)
- 2014-2015 The certificate of “*Center for the Integration of Research, Teaching and Learning Associate*” at Iowa State University, Ames IA USA, 2014-2015.

## Research Grants

- Iowa Soybean Association. High-yield soybean trials and real-time forecasting at regional scale, co-PI, \$240K, 2017-2020.

## Publications:

- 24 peer reviewed international publications; >800 citations; h-index=15
- 18 (3 invited) oral and poster presentations at conferences and workshops.
- 1 extension publication

## Peer Reviewed Publications:

**Iqbal J**, Necpalova M, Archontoulis SV, Anex RP, Bourguignon M, Herzmann D, Mitchell DC, Sawyer JE, Zhu Q, Castellano MJ. 2018. Extreme weather-year sequences have non-additive effects on environmental nitrogen losses. *Global Change Biology* 24, 303-317.

Ordonez RA, Castellano MJ, Hatfield JL, Helmers MJ, Licht M, Liebman M, Dietzel RN, Martinez-Feria R, **Iqbal J**, Puntel LA, Cordova C, Togliatti K, Wright E, Archontoulis SC. 2018. Corn and Soybean root front velocity and maximum depth in the Midwest USA. *Field Crop Research*, 215: 122-131.

Shahbaz AK, Lweinska K, **Iqbal J**, Ali Q, Rahman M, Iqbal, M, Abbas F, Tauqeer HM, Ramzani PMA. 2018. Improvement in productivity, nutritional quality, and antioxidative defense mechanisms of sunflower (*Helianthus annuus* L.) and maize (*Zea mays* L.) in nickel contaminated soil amended with different biochar and zeolite ratios. *Journal of Environmental Management*, 218: 256-270.

- Iqbal J**, Mitchell DC, Barker DW, Miguez F, Sawyer JE, Pantoja J, Castellano MJ. 2015. Does nitrogen fertilizer rate to corn affect N<sub>2</sub>O emissions from the rotated soybean crop? *Journal of Environmental Quality*, 44:711-719.
- Iqbal J**, Parkin TB, Helmers MJ, Zhou X, Castellano MJ. 2015. Denitrification and N<sub>2</sub>O emissions in annual croplands, perennial grass buffers and restored perennial grasslands. *Soil Science Society of America Journal* 79; 239-250.
- Necpálová M, Anex RP, Fienen MN, Del Grosso SJ, Castellano MJ, Sawyer JE, **Iqbal J**, Pantoja J, Barker D. 2015. Understanding the DayCent model: calibration, sensitivity, and identifiability through inverse modeling. *Environmental Modelling and Software* 66,110-130.
- Iqbal J**, Castellano MJ, Parkin TB. 2014. Accuracy and precision of no instrument is guaranteed: A reply to Rosenstock et al. *Global Change Biology* 20, 1363-1365.
- Iqbal J**, Castellano MJ, Parkin TB. 2013. Evaluation of photoacoustic infrared spectroscopy for simultaneous measurement of N<sub>2</sub>O and CO<sub>2</sub> gas concentrations and fluxes at the soil surface. *Global Change Biology* 19, 327-336.
- Iqbal J**, Nelson J, McCulley RL. 2013. Fungal endophyte presence and genotype affect plant diversity and soil-to-atmosphere trace gas fluxes. *Plant and Soil* 364-15-27.
- Shan L, **Iqbal J**, Ronggui H, Shaan M, Cai J, Chen X. 2013. Nitrous Oxide emission from yellow brown soil as affected by incorporation of crop residues with different carbon to nitrogen ratios: A case study in central China. *Archives of Environmental Contamination and Toxicology*. 10.007/s00244-013-9903-7.
- Ibrahim M, Cao CG, Zhan M, Li CF, **Iqbal J**. 2013. Changes of CO<sub>2</sub> emission and labile organic carbon as influenced by rice straw and different water regimes. *International Journal of Environmental Science and Technology*. 10.1007/s13762-013-0429-3.
- Nkwopara U, Ibrahim M, Maha A, **Iqbal J**, Qingling F, Jun Z, Guanjie J, Hongqing H. 2013. Impacts of inorganic ions and temperature on lead adsorption onto variable charge soils. *Catena* 109, 103-109.
- Ahamadou B, Qiaoyun H, Lin Y, **Iqbal J**. 2013. Composition and structure of humic substances in long-term fertilization experimental soils of southern China. *Journal of Soil Science and Environmental Management* 4(4), 77-86.
- Iqbal J**, Shan L, Ronggui H, Feng ML, Liu R. 2013. CH<sub>4</sub> oxidational potential of different land uses in mid-subtropical China. *Pedosphere* 23(5), 609-619.
- Iqbal J**, Siegrist AJ, Nelson J, McCulley RL. 2012. Fungal endophyte infection increases carbon sequestration potential of southeastern USA tall fescue stands. *Soil Biology and Biochemistry* 44, 81-92.
- Shan L, **Iqbal J**, Ronggui H, Leilei R, Wu J, Zhao J, Wang P. 2012. Differences in nitrous oxide fluxes from red soil under different land uses in mid-subtropical China. *Agriculture, Ecosystem and Environment* 146, 168-178.
- Shan L, **Iqbal J**, Ronggui H, Jinshui W, Zhao J, Leilei R, Malghani S. 2011. Nitrous oxide emissions from rape field as affected by nitrogen fertilizer management: A case study in central China. *Atmospheric Environment* 45, 1775-1779.

- Iqbal J**, Ronggui H, Minglei F, Shan L, Saadatullah M, Ibrahim MA. 2010. Microbial biomass, and dissolved organic carbon and nitrogen strongly affect soil respiration in different land uses: A case study at Three Gorges Reservoir Area, South China. *Agriculture, Ecosystem and Environment*, 137, 294-307.
- Shan L, **Iqbal J**, Ronggui H, Minglei F. 2010. N<sub>2</sub>O emissions from different land uses in mid-subtropical China. *Agriculture, Ecosystems and Environment* 136, 40-48.
- Minglei F, Ronggui H, Shan L, Saadatullah M, **Iqbal J**, Ryusuke H. 2010. Influence of land use on nitrate concentrations in baseflow in a rural watershed of Three Gorges Reservoir Area, China. *Journal of Food, Agriculture and Environment* 8 (1), 132-137.
- Iqbal J**, Ronggui H, Shan L, Ryusuke H, Minglei F, Lu L, Ahamadou B, Lijun D. 2009. CO<sub>2</sub> emission in a subtropical red paddy soil (Ultisol) as affected by straw and N-fertilizer applications: A case study in Southern China. *Agriculture, Ecosystems and Environment* 131, 292-302.
- Iqbal J**, Ronggui H, Shan L, Ahamadou B, Minglei F. 2009. Carbon dioxide emissions from Ultisol under different land use types in mid-subtropical China. *Geoderma*, 152-63-73.
- Iqbal J**, Shan L, Ronggui H, Minglei F. 2009. Temporal variability of soil CO<sub>2</sub> and CH<sub>4</sub> fluxes from different land uses in mid-subtropical China. *Atmospheric Environment*, 43-5865-5875.
- Iqbal J**, Ronggui H, Lijun D, Lan L, Shan L, Tao C, Leilei R. 2008. Differences in soil CO<sub>2</sub> flux between different land use types in mid-subtropical China. *Soil Biology and Biochemistry* 40, 2324-2333.

### **Extension Publications:**

- Castellano M, **Iqbal J**, Helmers M, Strock J. 2014. Crop and soil management effects on greenhouse gas emissions from corn based systems. Contributed papers from the 5<sup>th</sup> Soil and Water Management Field Day 23 July 2014, Lamberton, Minnesota.

### **Invited Presentations:**

- Measuring greenhouse gases, 3<sup>rd</sup> Annual Sustainable Corn Meeting, Resilient Agriculture: Adapting to a Changing Climate, Agronomy and Extension Farm Ames IA, Field Day Aug 7 2014.
- Spatial variability of corn and soybean yields in Iowa counties. Iowa State University GIS lab. Dec 10 2014.
- Soil N<sub>2</sub>O and CO<sub>2</sub> flux measurements by photoacoustic infrared spectroscopy. Climate and Corn-based Cropping Systems Project Annual Meeting, Chicago, IL. 2011.

## Conference Abstracts and Presentations:

- Iqbal J**, Castellano JM, Archontoulis SV. 2018. Impacts of tile drainage on N dynamics in Southeast Iowa. *Climatology and Modelling II, ASA-CSSA International Annual Meetings*, Nov 4-7, 2018, Baltimore, MD, USA.
- Iqbal J**, Castellano JM, Nelpalova M, Archontoulis SV, Sawyer JE, Herzmann D, Anex RP. 2016. Extreme precipitation years impact soil N loss in Mid-west corn-soybean cropping system. *Environmental Quality, ASA-CSSA-SSSA International Annual Meetings*, Nov 6-9, 2016, Phoenix, AZ, USA.
- Archontoulis SV, Dietzel RN, Castellano JM, VanLoocke A, Antonio-Ordonez RA, **Iqbal J**, Puntel L, Cordova SC, Martinez-Feria RA, Togliatti K, Huber I, Herzmann D, Helmers MJ. 2016. Forecasting and assessing cropping systems (FACTS). *Climatology and Modelling, ASA-CSSA-SSSA International Annual Meetings*, Nov 6-9, 2016, Phoenix, AZ, USA.
- Iqbal J**, Castellano JM, Helmers MJ, Parkin TB, Kladviko EJ. 2015. Nitrous oxide emissions as affected by drainage design and management in corn based cropping systems. *Soil & Water Management & Conservation, ASA-CSSA-SSSA International Annual Meetings*, Nov 15-18, 2015, Minneapolis, MN, USA.
- Iqbal J**, Mitchell CD, Barker WD, Miguez F, Sawyer EJ, Pantoja J, Castellano JM. 2014. Can nitrogen fertilizer applied to corn affect N<sub>2</sub>O emissions the following year from a corn-soybean rotation in US Midwest? *Soils and Environmental Quality, ASA-CSSA-SSSA International Annual Meetings*, Nov 2-5, 2014, Long beach, CA, USA.
- Osterholz WR, Castellano MJ, Liebman M, **Iqbal J**. 2014. Increasing Rates of Gross Nitrogen Mineralization in Diversified Midwestern Cropping Systems. In: *Managing Microbial Communities and Processes in Organic, Transition and Hybrid Agroecosystems: II. ASA-CSSA-SSSA International Annual Meetings*, Nov 2-5, 2014, Long beach, CA, USA.
- Iqbal J**, Castellano M, Helmers M, Parkin BT, Xiaobo Z. 2013. Nitrate Removal by Perennial Filter Strips in the Toeslope Of Cropland Watersheds. In: *Nutrient Loss as Affected by Management, Soils and Environmental Quality, ASA-CSSA-SSSA International Annual Meetings*, Nov 3-6, 2013, Tampa, FL, USA.
- Iqbal J**, Castellano M, Parkin BT. 2012. Evaluation of photoacoustic infrared spectroscopy for simultaneous measurement of N<sub>2</sub>O and CO<sub>2</sub> gas concentrations and fluxes at the soil surface. In: *Challenges in Measuring Greenhouse Gas Emissions from soil, ASA-CSSA-SSSA International Annual Meetings*, Oct 21-24, 2012, Cincinnati, OH, USA.
- Iqbal J**, Nelson J, Carlisle E, McCulley R. 2011. Influence of fungal endophyte genotypes on plant diversity and soil-atmospheric trace gas fluxes. *ASA-CSSA-SSSA International Annual Meetings*, Oct 16-19, 2011, San Antonio, TX, USA.
- Iqbal J**, Ronggui H. 2010. CO<sub>2</sub> emissions with different soil organic pools and temperature sensitivity. Theme 5: *Impact of changing environmental controls on SOM dynamics; Organic matter stabilization and ecosystem functions*, 19th-23rd September 2010, Presqu'île de Giens (Cote d'Azur), France, pp 112.

- Iqbal J**, Ronggui H. 2010. Soil respiration in association with soil organic carbon fractions from different landuses. Theme 5: *Impact of changing environmental controls on SOM dynamics; Organic matter stabilization and ecosystem functions*, 19th-23rd September 2010, Presqu'île de Giens (Cote d'Azur), France, pp149.
- Iqbal J**, Ronggui H, Ibrahim MA, Saadatullah M. 2010. On the microbial biomass and dissolved organic substances dependence of soil Respiration. Theme 3: *Microbial communities as drivers of OM dynamics; Organic matter stabilization and ecosystem functions*, 19th-23rd September 2010, Presqu'île de Giens (Cote d'Azur), France, pp198.
- McCulley R, McNear D Jr, **Iqbal J**. 2010. Effects of endophyte symbiosis on belowground processes. *Joint Meeting of the Mycological Society of America and the International Symposium on Fungal Endophytes of Grasses* June 28-July 1, 2010, pp 68-69.
- Minglei F, Shan L, Ronggui H, **Iqbal J**. 2010. The impact of nitrogen fertilization on nitrogen concentrations in stream explored with subwatershed and contributing zone approaches. *CHINA-US Workshop on Sustainable Management of Soil and Water Resources*, January 5-8 2010, Shenyang, China.
- Iqbal J**, Ronggui H. 2009. Effect of dissolve organic carbon, soil and air temperature, and soil moisture on soil CO<sub>2</sub> flux in different land uses. *IOP Conference Series: Earth and Environmental Science*, Volume 6, pages 152006 (1pp).
- Iqbal J**, Ronggui H, Shan L, Minglei F. 2008. Changes in carbon dioxide emissions in red paddy soil in the context of straw and nitrogen fertilizer application. *International Workshop on Soil C Sequestration and Climate Change Mitigation in Agriculture*, Nanjing, China, October 22-27.

## Extension Talks:

- Presented in-season N dynamics and impacts of planting date on corn yield and N use efficiency in Central Iowa. A field day on May 09, 2018. Agronomy Research Farm, Boone IA.
- Addressed soil nitrogen management challenges and their solutions to six separate groups of growers and scientists. A field day on Aug 7 2014. Agronomy and Extension Farm, Ames, IA

## Other Professional Activities:

- SSSA Student and Early Career Task Force Member (2017-2019).
- Judged Graduate Students Poster in *The Soil Fertility, Plant Nutrition, and Soil/Plant Analysis division, ASA-CSSA International Annual Meetings*, Nov 4-7, 2018, Baltimore, MD.
- SSSA Early Career Professional Committee member (2015-2016).
- Judged Graduate Students Poster in *The Soil Carbon and Greenhouse Gas Emission community, ASA-CSSA-SSSA International Annual Meetings*, Nov 6-9, 2016, Phoenix, AZ.

- Organized Iowa FFA Soil Judging Contest at Iowa State University Agronomy Farm Ames IA, Oct 10 2015.
- Judged Graduate Students Poster in *Wetland Soils* division, *ASA-CSSA-SSSA International Annual Meetings*, Nov 15-18, 2015, Minneapolis, MN.
- Presided Biological Nitrogen Fixation section in *Soil Biology and Biochemistry* division, *ASA-CSSA-SSSA International Annual Meetings*, Nov 2-5, 2014, Long beach, CA.
- Judged Graduate Students Poster in *Soil Biology and Biochemistry* division, *ASA-CSSA-SSSA International Annual Meetings*, Nov 3-6, 2013, Tempa, FL.
- Peer reviewed research articles in *Global Change Biology*, *Soil Biology & Biochemistry*, *FEMS Microbiology Ecology*, *Plos One*, *Environmental Science & Technology*, *Soil Science Society of America Journal*, *Journal of Environmental Quality*, *Agronomy Journal*, *Geoderma*, *Plant and Soil*, *Agriculture, Ecosystem & Environment*, *Plant Physiology and Biochemistry*, *Australian Journal of Crop Science*, *Environmental Management*, *Soil Science & Plant Nutrition*, *Pedoshpere*, and *British Journal of Environment and Climate Change*.
- Competent Communicator in Toastmasters International Club.

### **Professional Membership:**

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| 2013-present | American Society of Agronomy    |
| 2013-present | Crop Science Society of America |
| 2013-present | Soil Science Society of America |