

Jake E. Mowrer

Assistant Professor – Soil Nutrient and Water Resource Management
Department of Soil and Crop Sciences, Texas A&M University, College Station, Texas
Appointment: 100% Extension

Education:	2014	PhD	Soil Chemistry/Fertility University of Georgia
	2009	MS	Soil Chemistry/Fertility University of Georgia
	1995	BS	Environmental Health Science University of Georgia
Positions:	2015-present		Assistant Professor, Soil and Crop Sciences, Texas A&M University
	2014-2015		Interim Faculty Program Coordinator, Pesticides/Herbicides, Crop Quality, & Trace Metals Laboratory, Crop and Soil Sciences, University of Georgia
	2009-2014		Program Coordinator, Trace Metals Spectroscopy Laboratory, Crop and Soil Sciences, University of Georgia

Program Overview:

Extension: Providing leadership and education in the areas of soil and water resource stewardship. Increasing awareness and adoption of sustainable management practices for soil nutrients and water resources in agricultural and urban environments through outreach and demonstration. Improvement of impaired surface water resources through public involvement in watershed protection planning.

Research: Investigating crop yield, quality, and rooting pattern responses to fertilizers and carbon amendments in row crop, forage, vegetable, and specialty crop production systems. Refining our understanding of tillage, residue, crop sequence, and nutrient management to achieve goals in nutrient use efficiency, overall sustainability, and profitability for Texas' food and fiber producers.

Publications:

Book Chapters

Mowrer, J., N. Rajan, D Zapata, P Govindasamy A Maity, V. Singh, and D. Sarangi. 2019. "Soil management practices under the major crops in the United States and their potential to increase carbon sequestration." In Carbon Management in Tropical and Sub-Tropical Terrestrial Systems (Ed.s PK Ghosh, R. Lal, D. Mandal, B Mandal, Srinivasan R, & SK Mahanta). Springer Nature Singapore Pte Ltd, Singapore.

Peer Reviewed Journal Articles:

Mowrer, J., H. Schomberg, D. Indale. Evaluating the liming potential of poultry litter in a long term tillage comparison trial. (*Submitted to Soil and Tillage Research, minor revision requested*)

Mowrer, J., Dvorak, B., Merril, J. Urban agriculture in and on buildings with low inputs for the small stakeholder (*Accepted: Journal of Living Agriculture*)

Diana Zapata, Jake Mowrer, Kenneth Casey, Ronnie Schnell, Frank Hons. Impact of Long-Term Tillage on Soil CO₂ Emissions and Soil Carbon Sequestration in Monoculture and Rotational Cropping Systems (*Submitted Soil and Tillage Research*)

M. Bagavatiannan, P Govindasamy, F Hons, T Provin, J Mowrer, N. Rajan, Influence of Long-term (36 years) Tillage Practices on Soil Physical Properties in a Grain Sorghum Experiment in Southeast Texas
(Submitted *Geoderma Regional*)

Coker, Dennis, L., Dan D. Fromme, Mark L. McFarland, Jake E. Mowrer, and W. James Grichar. Managing residual nitrogen fertilization for corn production in the Texas Blacklands. (*Submitted Agronomy Journal*).

Schnell, R, S. Church, J. Mowrer, T. Provin, A. Thomassen. Impact of Starter Fertilizers on Grain Yield Potential and NUE in Sorghum. (In Review, *Agronomy Journal*)

Souissi, A., H. Baithari, M. Annabi, J. Mowrer. Effect of Tillage, Crop Rotation and N Fertilization on Rainfed Durum Wheat in a Semiarid Environment. (August 2019, Submitted to *Soil Science Society of America Journal*)

Ibrahimi, K., Mowrer, J., Amami, R. and Belaid, A., 2019. Burn effects on soil aggregate stability and water repellency of two soil types from East and North Tunisia. *Communications in Soil Science and Plant Analysis*, pp.1-11.

Fromme, D.D., D.L. Coker, M.L. McFarland, J.E. Mowrer, T.L. Provin, R.W. Schnell, and W.J. Grichar. 2017 Residual soil nitrogen credits for corn production along the upper Texas gulf coast region. 40:23-32.

Mowrer, J., P. Sedlacek, J. H. Kim, C. Ritz, and W.K. Kim. 2015. Supplementation of nitro-compounds in broiler diets: effects on bird performance, ammonia volatilization, and nitrogen retention in broiler manure. *Journal of Environmental Science and Health, Part B*. 51:126-131

Cassity-Duffey, K., M. Cabrera, **J. Mowrer**, and D. Kissel. 2015. Titration and spectroscopic measurements of poultry litter pH buffering capacity. *Journal of Environmental Quality*. 1283-1292.

Mowrer, J., M. Cabrera, T. Rasmussen, and K. Cassity-Duffey. 2014. Nitrogen in stored poultry litter: uric acid and xanthine. *Journal of Environmental Quality*. 2137-2145.

Mowrer, J., D. Kissel, M. Cabrera, and S. Hassan. 2014. Near-infrared calibrations for organic, inorganic, and mineralized nitrogen from poultry litter. *Soil Science Society of America Journal*. 1775-1785.

Mowrer, J., D.E. Kissel, M. Cabrera, and S.M. Hassan. 2013. Nondegradative extraction and measurement of uric acid from poultry litter. *Soil Science Society of America Journal*. 1413-1477.

Mishra, A., O. Afik, M. Cabrera, K.S. Delaplane, and **J. Mowrer**. 2013. Inorganic nitrogen derived from foraging honey bees could have adaptive benefits for the plants they visit. *PLOS ONE* 8(7) e70591.

Memberships

Southern Cover Crop Council (Chair Elect)

Professional Soil Scientists Association of Texas

Soil Science Society of America

Crop Science Society of America

Agronomy Society of America

Southeastern Extension and Research Activity Information Exchange Group 6 (SERA-IEG-6) Fulbright Specialists

Editorial Boards:

Journal of Plant Nutrition

Communications in Soils Science and Plant Analysis

Soil Science Society of America Journal

International Programs:

As a member of the Department of Soil and Crop Sciences Committee on International Agriculture, I work with colleagues in a variety of disciplines on the department's efforts to provide leadership in global agriculture. Our programs include study abroad, collaborative research and global Extension. I work directly with the Norman Borlaug Institute to provide mentorship to international scholars in soil science.