

J Mowrer Curriculum Vitae (short form)

Jake Mowrer

Extension Associate Professor – Soil Nutrient and Water Resource Management
Texas A&M AgriLife Extension |Department of Soil and Crop Sciences
College Station, TX 77843
Appointment: 100% Extension

Education:

Ph.D. 2014 Soil Chemistry/ Soil Fertility | Dept. Crop and Soil Sciences, University of Georgia
M.S. 2009 Soil Chemistry/ Soil Fertility | Dept. Crop and Soil Sciences, University of Georgia
B.S. 1995 Environmental Health | University of Georgia

Program Overview:

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.

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, sustainability, climate change mitigation, and profitability for Texas' food and fiber producers.

Publications (most recent 4 years):

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.

Refereed Journal

- S. Hadad, **J. Mowrer**, B. Thapa (2022) Biochar and compost from cotton plant waste inconsistently affect water use efficiency, N-fixation potential, and growth of legumes under arid conditions in soils from Southwestern, U.S.A. *Journal of Environmental Management* 307:11458
<https://doi.org/10.1016/j.jenvman.2022.114558>
- V. Balan, D. Benhaddou, W, Zhu, H.S. Krishnamoorthy, **J. Mowrer**. (2021) Challenges and opportunities in Producing High-Quality Edible Mushrooms from Lignocellulosic Biomass in a Small-Scale Applied Microbiology and Biotechnology. *Applied Microbiology and Applied Biotechnology published online Jan 31 2022* <https://doi.org/10.1007/s00253-021-11749-2>
- A. Ouattara, B. Koulibaly, D. Dakouo, P. Bazongo, K. Coulibaly, **J. Mowrer**, and B. H. Nacro. Effects of three cropping management systems on crop yield and soil chemical characteristics of tropical ferruginous soil in West of Burkina Faso (*accepted African Journal of Agricultural Research (AJAR) 083121*)
- Mowrer, J.,** Tony Provin, Binita Thapa & Steven Perkins (2022) Thermal Desorption Temperature Affects Water Retention and Hydraulic Conductivity of Three Contrasting Soils, *Communications in Soil Science and Plant Analysis*, 53:1, 45-62,
<https://doi.org/10.1080/00103624.2021.1971698>

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- Govindasamy, P, R. Liu, T Provin, N Rajan, F Hons, **J Mowrer**, M Bagavathiannan (2021) Soil carbon improvement under long-term (36 years) no-till sorghum production in a sub-tropical environment. *Soil Use and Management* 37:37–48 DOI:10.1111/sum.12636
- Zapata, D., N. Rajan, **J. Mowrer**, R. Schnell, and K. Casey . 2021. Long-term Tillage Effect on Within Season Variations in Soil Conditions and Respiration from Dryland Winter Wheat and Soybean Cropping Systems. *Scientific Reports* 11 (1), 1-10.
- Bhattacharya, P., P. Pramanik Maity, **J. Mowrer**, A. Maity, M. Ray, S. Das, B. Chakrabarti, T. Ghosh, and P. Krishnan, 2020. Assessment of soil health parameters and application of the sustainability index to fields under conservation agriculture for 3, 6, and 9 years in India, *Heliyon*, Volume 6, Issue 12. <https://doi.org/10.1016/j.heliyon.2020.e05640> .
- Govindasamy, P., **Mowrer, J.**, Rajan, N., Provin, T., Hons, F. and Bagavathiannan, M., 2021. Influence of long-term (36 years) tillage practices on soil physical properties in a grain sorghum experiment in Southeast Texas. *Archives of Agronomy and Soil Science*, pp.1-11.
- Mowrer, J.**, Merrill, J., Dvorak, B. 2019. Rooftop urban agriculture for the small stakeholder. *Journal of Living Agriculture*. 6:1-16.
- Mowrer, J.**, Endale, D., Schomberg, H., Norris, S., and Woodruff, R. 2019. The liming potential of poultry litter in a long-term tillage study. *Soil and Tillage Research* 196:104446.
- 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.

Memberships

- Soil Science Society of America (member 2009)
- Crop Science Society of America (member 2012)
- Agronomy Society of America (member 2012)
- SERA 6 IEG Southern Extension and Research Activity Information Exchange Group 6 (member 2007)
- Professional Soil Scientists Association of Texas (member 2017)
- Southern Cover Crop Council (Member; Officer – 2019 Chair)

Awards

- **A Program with Impact** (UGA Extension 2015)
- **Fulbright Specialist** (US Department of State 2017)
- **Transformative Teaching Award** (Texas A&M University Center for Teaching Excellence 2017)