Florida

Naba R. Amgain, Abul Rabbany, Salvador Galindo, and **Jehangir H. Bhadha**. 2021. Effects of Water Management Strategies and Nitrogen Fertilizer on Rice Yield Cultivated on Histosols. Journal of Rice Research and Developments. 4(1): 331-338. http://doi.org/10.36959/973/431

Marcel Barbier, Abul Rabbany, and **Jehangir H. Bhadha**. 2021. Assessing the effect of basalt rock fines, activated humic substances and its interaction on rice growth and yield. Journal of Rice Research. 9: 260. https://www.omicsonline.org/open-access/assessing-the-effect-of-basalt-rock-fines-activated-humic-substances-and-its-interaction-on-rice-growth-and-yield.pdf

Naba R. Amgain, Quinn Zacharaius, Abul Rabbany, and **Jehangir H. Bhadha**. 2021. Effect of sulfur on rice water quality, nutrient uptake, and yields grown on shallow Histosols. Journal of Rice Research and Developments. 4(1): 324-330. http://doi.org/10.36959/973/430

Bobby G. Duersch, Matthew O. Powers, Susan Newman, John G. Ricca, **Jehangir H. Bhadha**, and William J. Louda. 2021. Phosphorus retention within a relic agricultural ditch in a constructed wetland. Journal of Environmental Quality. https://doi.org/10.1002/jeq2.20278

Nan Xu, **Jehangir H. Bhadha**, Abul Rabbany, Stewart Swanson, James M. McCray, Yuncong C. Li, Sarah L. Strauss, and Rao Mylavarapu. 2021. Crop nutrition and yield response of bagasse application on sugarcane grown on a mineral soil. Agronomy. 11(8), 1526. <https://doi.org/10.3390/agronomy11081526>

**Jehangir H. Bhadha**, Nan Xu(G), Abul Rabbany, Naba R. Amgain(P), Jay Capasso(G), Kevin Korus, and Stewart Swanson. 2021. On-farm soil health assessment of cover cropping in Florida. Sustainable Agriculture Research Journal. 10(2): 17-32. https://doi.org/sar.v10n2p17

**Jehangir H. Bhadha**, Jay Capasso(G), Abul Rabbany, Nan Xu(G), Mathew VanWeelden. 2021. Bagasse: Soil Health Response of Histosols to Flooded versus Dry-Fallow Conditions during Summer. University of Florida IFAS EDIS Publication. SL484.

Illinois

Xia, Y. and **M.M. Wander**\*, 2021. Evaluation of Indirect and Direct Scoring Methods to Relate Biochemical Soil Quality to Ecosystem Services. Soil Science Society of America. doi:10.1002/saj2.20370.

Xia, Y., **M.M. Wander\***, 2021. Responses of β-glucosidase, Permanganate Oxidizable Carbon, and Fluorescein Diacetate Hydrolysis to Conservation Practices. Soil Science Society of America. 85:5: 1642-1662.

Xia, X. Kwon, HY, and **M.M. Wander**.\* 2021. Developing County-level Data of Nitrogen Fertilizer and Manure Inputs for Corn Production in the United States. Journal of Cleaner Production. 309: <https://doi.org/10.1016/j.jclepro.2021.126957>

Snapp, S. **Ugarte, C.,** Hunter, D. and **M. Wander**. 2021. CH11 - Assessing the effects of cover crops on soil health. In: Horwath, W. Ed. Improving Soil Health. Burleigh Dodds.

**Wander, M**. 2021. CH 1. Soil health: definitions, history, key concepts and hurdles. In: Horwath, W. Ed. Improving Soil Health. Burleigh Dodds.

da Costa, C.J. M., **Wander, M.M**., **Ugarte, C.M.**, Rigon, J.P.G., Soratto, R.P, and J.C. Calonego. 2021 Long-term effects of lime and phosphogypsum on soil carbon and nitrogen and physical attributes under tropical no-till. Soil Science Society of America Journal. <https://doi.org/10.1002/saj2.20182>.

Obour, P.B. and **C.M. Ugarte**. 2021. A meta-analysis of the impact of traffic-induced compaction on soil mechanical and hydraulic properties, and grain yield – perspectives for future research. Soil and Tillage Research. doi: [10.1016/j.still.2021.105019](https://doi.org/10.1016/j.still.2021.105019)

Han, J., **C.M. Ugarte**, M. Nunez Flores, M. Hansen, C.R. Bowen, N. Schroeder, and G. Hartman. Plant-parasitic and free-living nematodes in organically farmed fields in Illinois and Wisconsin. doi: 10.1094/PHP-06-21-0096-S

Minnesota

**Cates, A. M**., Wills, B. D., Kim, T. N., Landis, D. A., Gratton, C., Read, H. W., & Jackson, R. D. (2021). No evidence of top-down effects by ants on litter decomposition in a temperate grassland. *ECOSPHERE, 12*(7).  [doi: 10.1002/ecs2.3638](http://dx.doi.org/10.1002/ecs2.3638)

[Candelaria, N., **Grossman, J**., Rogers, M., & Fernandez, A. (2021). Exploring multifunctionality of summer cover crops for organic vegetable farms in the upper Midwest. Renewable Agriculture and Food Systems.](https://doi.org/10.21273/HORTSCI15987-21)

[Perkus, E., **Grossman, J**., Pfeiffer, A., Rogers, M., & Rosen, C. Exploring overwintered cover crops as a soil management tool in upper-Midwest high tunnels. HortScience. https://doi.org/10.21273/HORTSCI15987-21](https://doi.org/10.21273/HORTSCI15987-21)

[Ginakes, P., & **Grossman, J**. (2021). Extending cover crop benefits with zone-till management in northern organic summer squash production. MDPI Agronomy, Section: Innovative Cropping Systems; Impacts of Cover Crop Management Strategies on Soil Health.](https://doi.org/10.21273/HORTSCI15987-21)

[Schaedel, M., Hidrobo, G., & **Grossman, J**. (2021). From microns to meters: exploring the functional benefits of the legume microbiome in agricultural soils. Frontiers in Sustainable Food Systems; Special Issue: Microbiome Research in Agroecosystems.](https://doi.org/10.21273/HORTSCI15987-21) <https://doi.org/10.3389/fsufs.2021.668195>

[Wauters, V., **Grossman, J**., Pfeiffer, A., & Cala, R. (2021). Ecosystem services and cash crop tradeoffs of summer cover crops in Northern region organic vegetable rotations. Frontiers in Sustainable Food Systems, section Agroecology and Ecosystem Services.](https://doi.org/10.21273/HORTSCI15987-21)

Dobbratz, M., **J. Gutknecht**, D. Wyse, C.C. Sheaffer, J.M. Jungers. (2021). Inconsistent effects of species diversity and N fertilization on soil microbes and carbon storage in perennial bioenergy cropping systems. Renewable Agriculture and Food Systems, 1-11

Jilling, A., M. Keiluweit, **J. Gutknecht**, A.S. Grandy. (2021). Priming mechanisms providing plants and microbes access to mineral-associated organic matter. Soil Biology and Biochemistry. In Press. https://doi.org/10.1016/j.soilbio.2021.108265

Jordan, N., **J. Gutknecht**, K.A. Bybee‐Finley, M. Hunter, T.J. Krupnik, C.M Pittelkow, P.V.V. Prasad S. Snapp (2020). To meet grand challenges, agricultural scientists must engage in the politics of constructive collective action. Crop Science, 61, 24-3110.1002/csc2.20318. doi: 10.1002/csc2.20318

North Dakota

De, M., J. A. Riopel, **L. J. Cihacek,** M. Lawrenko, R. Baldwin-Kordick, S. J. Hall, and M. D. McDaniel. 2020. Soil health recovery after grassland restoration. Evidence from a 40-year chronotoposequence. Soil Sci. Soc. Am. J. 84:568-586. doi:10.1002/saj2.200037.

Ademola, A. A., S. Rahman, **L. Cihacek**, and N. Nahar. 2020. Comparison of the reactor performance of alkaline-pretreated corn stover co-digested with dairy manure under solid state. Waste and Biomass Valorization doi:10.1007/s12549-020-01116-z

Yellajosula, G., **L. Cihacek**, T. Faller, and C. Schauer. 2020. Soil carbon change due to land conversion to grassland in a semi-arid environment. Soil Sys. 4, 43; doi:10.3390/soilsystems4030043.

Chatterjee, A., A. Filipe de Jesus, D. Goyal, S. Sigdel, **L. J. Cihacek**, B. Farmaha, S. Jagdamma, L. Sharma, and D. S. Long. 2020. Temperature sensitivity of denitrification, volatalization, and nitrogen mineralization of agricultural soils across the United States. Open J. Soil Sci. 10: 298-305. doi:10.4236/ojss.2020.107016.

Oregon

Ghimire, R., P. Bista., and **S. Machado**. 2019. Long-term Management Effects and Temperature

Sensitivity of Soil Organic Carbon in Grassland and Agricultural Soils. [Sci Rep.](https://www.ncbi.nlm.nih.gov/pubmed/31434925) 2019 Aug

21;9(1):12151. doi: 10.1038/s41598-019-48237-7.

Bista, P., R. Ghimire, **S. Machado**, and L. Pritchett. 2019. Biochar Effects on Soil Properties and

Wheat Biomass vary with Fertility Management. Agronomy 2019, 9, 623;

doi:10.3390/agronomy9100623

Awale, R., **S. Machado**, and K. Rhinhart. 2018. Soil carbon, nitrogen, pH, and crop yields in

winter wheat-spring pea systems. Agron. J. doi: 10.2134/agronj2017.07.0371.

Ghimire, R., **S. Machado**, and P. Bista. 2018. Decline in soil organic carbon and nitrogen limits

 yield in wheat-fallow systems. Plant Soil 422:423-435.

Awale, R., M. Emeson, and **S. Machado**. 2017. Soil organic carbon pools as early indicators for soil organic matter stock changes under different tillage practices in inland Pacific Northwest. *Front. Ecol. Evol. 5:96. Doi: 10.3389/fevo.2017.00096*

Awale, R., **S. Machado**, R. Ghimire, P. Bista. Soil Health. In Georgine Yorgey and Chad Kruger (eds) Advances in Dryland Farming in the Inland Pacific Northwest. Washington State University, pp 47-98

Bista, P., **S. Machado**, R. Ghimire, G. Yorgey, D. Wysocki. 2017. Conservation Tillage Systems. In Georgine Yorgey and Chad Kruger (eds) Advances in Dryland Farming in the Inland Pacific Northwest. Washington State University, pp 98-124.

Yorgey, G., W. Pan, R. Awale, **S. Machado**, A. Bary. 2017. In Georgine Yorgey and Chad Kruger (eds) Advances in Dryland Farming in the Inland Pacific Northwest. Washington State University, pp 283-318.

Maaz, T.M., W. F. Schillinger, **S. Machado**, E. Brooks, J. L. Johnson-Maynard, L. E. Young, F. L. Young, I. Leslie, A. Glover, I. J Madsen, A. Esser, H. P. Collins, W. L. Pan. 2017. Impact of Climate Change Adaptation Strategies on Winter Wheat and Cropping System Performance across Precipitation Gradients in the Inland Pacific Northwest, USA

Hansen, N.C., B.L. Allen, S. Anapalli, R.E. Blackshaw, D.J. Lyon, and S. **Machado** (2017) Dryland agriculture in North America. In: Farooq M, Siddique KHM (eds) Innovations in dryland agriculture. Cham, Springer, pp 415–441.

Ghimire, R., **S. Machado**, and P. Bista. 2017. Soil pH, soil organic matter, and Crop Yield in Wheat-Fallow Systems. *Agron J*. 109:1–12. doi:10.2134/agronj2016.08.0462

Bista, P., **S. Machado**, R. Ghimire, S. J. Del Grosso, and M. Reyes-Fox. 2016. Simulating soil organic carbon in a wheat-fallow system using the Daycent Model. *Agron J*. 108:2554-2565

Tennessee

Singh, S., **Jagadamma, S.**, Liang, J., Kivlin, S.N., Wood, J.D., Wang, G., Schadt, C.W., Dupont, J.I., Gowda, P., and Mayes, M.A. 2021. Differential organic carbon mineralization responses to soil moisture in three different soil orders under mixed forested system. *Frontiers in Environmental Science.* 9: 682450.

Littrell, J., Xu, S., Omondi, E., Saha, D., Lee, J., and **Jagadamma, S.** 2021. Long-term organic management combined with conservation tillage enhanced soil organic carbon accumulation and aggregation. *Soil Science Society of America Journal* 85(5): 1741-1754.

Singh, S., Mayes, M.A., Shekoofa, A., Kivlin, S.N., Bansal, S., and **Jagadamma, S.** 2021. Soil organic carbon cycling in response to simulated soil moisture variation under field conditions. *Scientific Reports* 11(1): 1-13.

Abramoff, R.Z., Georgiou, K., Guenet, B., Torn, M.S., Huang, Y., Zhang, H., Feng, W., **Jagadamma,** **S.**, Kaiser, K., Kothawala, D., Mayes, M.A., and Ciais, P. 2021. How much carbon can be added to soil by sorption? *Biogeochemistry,* 152: 127-142

.

Xu, S., **Jagadamma, S.**, Ashworth, A.J., Singh, S., Owens, P.R., and Moore, Jr, P.A. 2021. Long-term effects of pasture management and fenced riparian buffers on soil organic carbon content and aggregation. *Geoderma* 382: 114666.

Singh, S., **Jagadamma, S.**, Yoder, D., Yin, X., and Walker, F. 2020. Agroecosystems management responses to Haney soil health test in the southeastern United States. *Soil Science Society of America Journal* 84: 1705-1721.

Wisconsin

Lehmann, J., A. Cowie, C.A. Masiello, C. Kammann, D. Woolf, J.E. Amonette, M.L. Cayuela, M. Camps-Arbestain, and **T. Whitman**. (2021). Biochar in climate change mitigation. *Nature Geoscience*, 14, 883-892.

Neurath, R., J. Pett-Ridge, I. Chu-Jacoby, D. Herman, **T. Whitman**, P. Nico, A. Lipton, J. Kyle, M.M. Tfaily, A. Thompson, and M.K. Firestone. (2021). Root carbon interaction with soil minerals is dynamic, leaving a legacy of microbially derived lipids. *Environmental Science and Technology*, 55, 13345-13355.

Fischer, M., F. Stark, T.D. Berry, N. Zeba, **T. Whitman**, and M. Traxler. (2021). Pyrolyzed substrates induce aromatic compound metabolism in the post-fire fungus, *Pyronema domesticum*. *Frontiers in Microbiology*, 12, 729289.

Braus, M. and **T. Whitman.** (2021)*.* Standard and Non-Standard Measurements of Acidity and the Bacterial Ecology of Northern Temperate Mineral Soils. *Soil Biology and Biochemistry*, 160, 108323.

**Whitman, T.**, S. DeCiucies, K. Hanley, A. Enders, J. Woolet and J. Lehmann. (2021) Microbial community shifts reflect losses of native soil carbon with pyrogenic and fresh organic matter additions and are greatest in low-carbon soils. *Applied and Environmental Microbiology*, 87, e02555-20.

DeForest, J., R. Dorkoski, **Z. B. Freedman**, and K. Smemo. 2021. Multi-year soil microbial and extracellular phosphorus enzyme response to lime and phosphate addition in temperate hardwood forests. *Plant and Soil*. 464: 391–404.

Carrara, J., C. Walter, **Z. B. Freedman**, J. S. Hawkins, and E. R. Brzostek. 2021. Differences in microbial community response to nitrogen fertilization result in unique enzyme shifts between arbuscular and ectomycorrhizal dominated soils. *Global Change Biology*. 27(10): 2049-2060.

Collier, S.M. and M.D. Ruark. 2021. Pre-incubation soil handling can influence comparability of potentially mineralizable nitrogen results. Communications in Soil Science and Plant Analysis. 52:1121-1131 doi: 10.1080/00103624.2021.1872607.