

## Maria Lucia Silveira

### *Curriculum Vitae*

Professor, Soil and Water Science  
University of Florida – Range Cattle Res. and Ed. Ctr.  
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#### 1. EDUCATIONAL BACKGROUND

University of Sao Paulo, Brazil	Soil Science	Ph.D.	2003
University of Sao Paulo, Brazil	Soil Science	M.S.	1999
University of Sao Paulo, Brazil	Agronomy	B.S.	1996

#### 2. EMPLOYMENT

University of Florida	Professor	July 2019 – present
University of Florida	Associate Professor	July 2012 – June 2019
University of Florida	Assistant Professor (tenure-accruing)	August 2006 – June 2012
Texas A&M University	Post Doctoral Associate (non-tenure accruing)	January 2006 – July 2006
University of Florida	Chemist (non-tenure accruing)	June 2004 – December 2005
University of Florida	Post Doctoral Associate (non-tenure accruing)	March 2003 – June 2004
University of California	Doctoral Research Scientist (non-tenure accruing)	September 2001 – September 2002

#### 3. PROFESSIONAL DEVELOPMENT

2015 (7 months) Visiting Professor, University of Queensland, Brisbane, Australia

#### 4. AREAS OF RESEARCH SPECIALIZATION

- Grassland biogeochemistry
- Nutrient management and water quality
- Soil carbon sequestration/greenhouse gas emissions

**5. GRADUATE COMMITTEE ACTIVITIES:** Total of 9 (6 Ph.D. and 3 MS) graduate students as chair or co-chair and 33 (15 Ph.D. and 18 MS) as a member of graduate student committee. Total of 24 postdoctoral research associates/visiting scientists.

#### 6. PUBLICATIONS AND GRANTS

- Career publication -373; Refereed Publications- 128; Non-refereed articles- 102; Abstracts- 143. Total number of peer-reviewed journal article citations- 1261 (average of 10.3 citations per article).
- Grants: Principal investigator or co-principal investigator on grants totaling 9.1 million dollars since 2006.

## 7. AWARDS

- March 2020, University of Florida/IFAS High Impact Publication Award
- April 2017 – University of Florida University of Florida, Term Professorship in Research
- March 2017, University of Florida/IFAS High Impact Publication Award
- August 2013 - Florida Association of County Agricultural Agents (FACAA), 2013 Outstanding Specialist
- June 2013 – Florida Cattlemen’s Association, 2013 Researcher of the Year Award

## 8. ENGAGEMENT IN THE PROFESSION

- Membership
  - Soil Science Society of America (member, 2002-present)
  - Crop Science Society of America (member, 2006-present)
  - Agronomy Society of America (member, 2006-present)
  - Soil and Water Conservation (member, 2013-present)
- Multi-State and Network Activities
  - W4170 “Soil-Based Use of Residuals, Wastewater and Reclaimed Water” Multi-state workgroup (member: 2010-2019, chair: 2019-present)
  - USDA/Long-Term Agroecosystem Research (LTAR) Network - (director, 2014-present)
  - Nutrient Network (NutNet) – (member, 2011-present)
- Editorial and Scholarly Activities: Associate Editor, Crop Science (2014-2020) and Journal of Soil and Water Conservation (2018-2022), Agronomy Journal (2022-present)
- National Committees
  - SSSA, Soil and Water Management and Conservation (member: 2006-present, chair:2019-2020)
  - SSSA, Cross Cultural Experience Program Scholarship Committee (member, 2013-2015)
  - SSSA, Soil and Water Management and Conservation, Best Paper Award Committee (member: 2013-2014, chair: 2015 – 2019)
  - Member, ASA - Soil Carbon and Greenhouse Gas Emission Community (2017-present)

## 9. SELECTED PEER-REVIEWED PUBLICATIONS (last 3 yr, 2020-2022. Career Total = 128)

1. Kohmann, M.M., **Silveira, M.L.**, Brandani, C.B., Sanchez, J.M.D., da Silva, H.S., and Vendramini, J.M.B. 2022. Plant litter chemical characteristics drive decomposition in subtropical rangelands under prescribed fire management. *Rangeland Ecology and Management* (In Press)
2. Spiegel, S., Vendramini, J.M.B., Bittman, S., **Silveira, M.L.**, Gifford, C., Rotz, C.A., Ragosta, J., Kleimann, P.J.A. 2022. Recycling nutrients in the beef supply chain through circular manuresheds: Data to assess tradeoffs. *Journal of Environmental Quality* DOI: 10.1002/jeq2.20365.

3. Williams, M., et al. 2022. P-FLUX: A phosphorus budget dataset spanning diverse agricultural production systems in the U.S. and Canada. *Journal of Environmental Quality* DOI: 10.1002/jeq2.20351
4. Sanchez, J.M.D., Vendramini, J.M.B., **Silveira, M.L.**, Kohmann, M.M., Silva, H.M.S., Moriel, P., Hendry, D.D., Hendry, F. 2022. Ruminant digestibility and in-vitro methane emissions of native plant species in subtropical rangelands. *Rangeland Ecology & Management* 82:42-50. DOI: 10.1016/j.rama.2022.02.002.
5. Silva, L.S., Sollenberger, L.E., Mullenix, M.K., Kohmann, M.M., Dubeux, J.C.B., **Silveira, M.L.** 2022. Soil carbon and nitrogen stocks in nitrogen-fertilized grass and legume-grass forage systems. *Nutrient Cycling in Agroecosystems*, 122: 105-117. DOI: 10.1007/s10705-021-10188-9
6. Lu, Y., **Silveira, M.L.**, O'Connor, G.A., Vendramini, and Li, Y.C. 2022. Biochar type and application methods affected nitrogen and phosphorus leaching from a sandy soil amended with inorganic fertilizers and biosolids. *Agrosystems, Geosciences & Environment*, DOI: 10.1002/agg2.20236.
7. Bracho, R.G., **Silveira, M.L.**, Boughton, R., Sanchez, J.M.D., Kohmann, M.M., Brandani, C.B., Celis, G. 2021. Carbon dynamics and soil greenhouse fluxes in a Florida's native rangeland before and after fire. *Agricultural and Forest Meteorology*, DOI: 10.1016/j.agrformet.2021.108682
8. Radujkovic, D., Verbruggen, E., Seabloom, E.W., Bahn, M., Biederman, L.A., Borer, E.T., Boughton, E.H., Catford, J.A., Campioli, M., Donohue, I., Ebeling, A., Eskelinen, A., Fay, P.A., Hansart, A., Knops, J.M.H., MacDougall, A.S., Ohlert, T., Venterink, H.O., Raynaud, X., Risch, A., Roscher, C., Schutz, M., **Silveira, M.L.**, Stevens, C.J., Van Sundert, K., Virtanen, R., Wardle, G.M., Wragg, P.D., Vicca, S. 2021 Soil properties as key predictors of global grassland production: have we overlooked micronutrients? *Ecology Letters*. DOI: 10.1111/ele.13894
9. Silva, L.S. da, Sollenberger, L.E., Kohmann, M.K., Dubeux, J.C.B., Aryal, P., **Silveira, M.L.**, Vendramini, J.M.B. 2021. Litter mass and nitrogen disappearance in year-round nitrogen-fertilized grass and legume-grass forage systems. *Agronomy Journal* 113:5170-5182. DOI: 10.1002/agj2.20826
10. Paudel, S., Cobb, A.B., Boughton, E.H., Spiegel, S., Boughton, R.K., **Silveira, M.L.**, Swain, H.M., Reuter, R., Goodman, L.E., Steiner, J.L. 2021. A framework for sustainable management of ecosystem services and disservices in perennial grassland agroecosystems. *Ecosphere* DOI: 10.1002/ecs2.3837.
11. Lu, Y., **Silveira, M.L.**, O'Connor, G.A., Vendramini, J.M.B., Erickson, J.E., and Li, Y.C. 2021. Assessing the impacts of biochar and fertilizer management strategies on N and P balances in subtropical pastures. *Geoderma* 394 DOI: 10.1016/j.geoderma.2021.115038
12. Arthington, J.D., **Silveira, M.L.**, Caramalac, L.S., Fernandes, H.J., Heldt, J.S., and Ranches, J. 2021 Effects of varying sources of Cu, Zn, and Mn on mineral status and preferential intake of salt-based supplements by beef cows and calves and rainfall-induced metal loss. *Translational Animal Science*. DOI: 10.1093/tas/txab046.
13. Kohmann, M.M., Saha, A., **Silveira, M.L.**, Boughton, E.H., Swain, H., Brandani, C.B. 2021. Farm-scale phosphorus budgets of beef cow-calf operations. *Nutrient Cycling in Agroecosystem* 119:389-403. DOI: 10.1007/s10705-021-10130-z.

14. Lu, Y., **Silveira, M.L.**, Cavigelli, M., O'Connor, G.A., Vendramini, J.M.B., Erickson, J.E., and Li, Y.C. 2020. Biochar impacts on nutrient dynamics in subtropical grassland soil: 2. Greenhouse gas emissions. *Journal of Environmental Quality* 49:1421-1434. DOI: 10.1002/jeq2.20141.
15. Lu, Y., **Silveira, M.L.**, O'Connor, G.A., Vendramini, J.M.B., Erickson, J.E., Li, Y.C., and Cavigelli, M. 2020. Biochar impacts on nutrient dynamics in subtropical grassland soil: 1. Nitrogen and phosphorus leaching. *Journal of Environmental Quality* 49:1408-1420. DOI: 10.1002/jeq2.20139.
16. Garzon, J.A., Vendramini, J.M.B., **Silveira, M.L.**, Moriel, P., da Silva, H.M., Dubeux, J.C.B. Jr., Kaneko, M., Canelos, C.C., and Mamede, P.A. 2021. Harvest management and genotype effects on sunn hemp forage characteristics. *Agronomy Journal* 113:298-307. DOI: 10.1002/agj2.20465.
17. Orrico, M.A.P. Jr., Vendramini, J.M.B., Erickson, J., Moriel, P., **Silveira, M.L.**, Aguiar, A.D., Sanchez, J.M.D., Silva, W.L., Silva, H.M. 2020. Nutritive value and fermentation characteristics of silages produced from different sweet sorghum plant components with or without microbial inoculation. *Applied Animal Science* 36:777-783. DOI: 10.15232/aas.2020-02027
18. Reye-Cabrera, J., Erickson, J., Leon, R.G., Quadros, D.G., **Silveira, M.L.**, and Sollenberger, L.E. 2020. Bahiagrass pasture and elephantgrass bioenergy cropping systems differ in root traits. *Agronomy Journal* 112:4810-4821. DOI: 10.1002/agj2.20382.
19. Kohmann, M.M., **Silveira, M.L.**, Brandani, C.B., Aukema, K., 2020. Below-ground biomass decomposition is driven by chemical composition in subtropical pastures and native rangelands. *Agrosystems, Geosciences & Environment* DOI: 10.1002/agg2.20076
20. Kohmann, M.M., Sanchez, J., **Silveira, M.L.**, Brandani, C.B., Baldo, A., Borges, B., Ribeirinho, V., 2020. Intensification enhances litter carbon and nitrogen decomposition dynamics in subtropical grazinglands. *Agrosystems, Geosciences & Environment* DOI: 10.1002/agg2.20075
21. Risch et al. 2020. Global impacts of fertilization and herbivore removal on soil net nitrogen mineralization are modulated by local climate and soil properties. *Global Change Biology* 26:7173-7185. DOI: 10.1111/gcb.15308
22. Cooley, K.D., Sollenberger, L.E., Kohmann, M.M., Blount, A.S., Dubeux, Jr., J.C.B., **Silveira, M.L.**, da Silva, L.S., Aryal, P. 2020. Rhizoma peanut herbage and root-rhizome responses to extended regrowth periods. *Crop Science* 60:2802-2813. DOI: 10.1002/csc2.20236
23. **Silveira, M.L.**, Brandani, C.B., Kohmann, M.M., Erickson, J.E., Reyes-Cabrera, J., Leon, R.G., Sollenberger, L.E., Piotta, V., Quadros, D.G., Mello, S.Q.S. 2020. Short-term effects of bioenergy cropping on soil C and N dynamics in a Florida Ultisol. *Soil Science Society of America Journal* 84:1233-1246. DOI: 10.1002/saj2.20081
24. Lu, Y., **Silveira, M.L.**, Vendramini, J.M.B., Erickson, J.E., Li, Y. 2020. Biosolids and biochar application effects on bahiagrass herbage accumulation and nutritive value. *Agronomy Journal* 112, 1330-1345. DOI: 10.1002/agj2.20101
25. Spiegel, S., Kleinman, P., Endale, D., Bryant, R., Dell, C., Goslee, S., Meinen, R., Flynn, C., Baker, J., Browning, D., McCarty, G., Bittman, S., Carter, J., Cavigelli, M., Duncan, E., Gowda, P., Li, X., Ponce-Campos, G., Cibir, R., **Silveira, M.L.**, Smith, D., Arthur, S., Yang,

- Q.C. 2020. Manuresheds: Advancing nutrient recycling in US agriculture. *Agricultural Systems* 182. DOI: 10.1016/j.agsy.2020.102813
26. Wade, J., et al. 2020. Assessing the sensitivity and repeatability of permanganate oxidizable carbon as a soil health metric: An interlab comparison across soils. *Geoderma* 366, DOI: 10.1016/j.geoderma.2020.114235.
27. Silva, H.M.S., Vendramini, J.M.B., Oliveira, F.C.L., Soares, C.V.S., Kaneko, M. **Silveira, M.L.**, Sanchez, J.M.D., Yarborough, J.K. 2020. Harvest frequency effects in herbage characteristics of 'Mavuno' brachiariagrass. *Crop Science* 60:113-1122. DOI: 10.1002/csc2.20046.
28. Borges, B.M.M.N., Peixoto, F.R., Braga, M.M.; Brunozi, B.B., **Silveira, M.L.**, Coutinho, E.L.M. 2020. Response of bermudagrass to enhanced-efficiency fertilizers, application strategies and release under tropical conditions. *Australian Journal of Crop Science* 14:108-115 DOI: 10.21475/ajcs.20.14.01.p1929