

MARIA LUCIA SILVEIRA

Curriculum Vitae

Assistant Professor, Soil and Water Science
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EDUCATIONAL BACKGROUND

PhD, 2003, Soil Science and Plant Nutrition, University of Sao Paulo, Brazil.
MS, 1999, Soil Science and Plant Nutrition, University of Sao Paulo, Brazil.
BS, 1996, Agronomy, University of Sao Paulo, Brazil.

PROFESSIONAL EXPERIENCE

August, 2006 - present: Assistant Professor, University of Florida Range Cattle Research and Education Center, Ona, FL.
January, 2006 - July, 2006: Post Doctoral Research Associate, Texas A&M Research and Extension Center, Overton, TX.
June, 2004- December, 2005: Soil Chemist at the Environmental Soil Chemistry Laboratory, Soil and Water Science Department, University of Florida, Gainesville, FL.
March, 2003 - June, 2004: Post Doctoral Associate, Soil and Water Science Department, University of Florida, Gainesville, FL.
September, 2001 - August 2002: Doctoral Research Soil Scientist. Environmental Sciences Department, University of California, Riverside, CA.

RESEARCH FOCUS

Researches nutrient management strategies that result in optimum forage production and profitability, while protecting Florida water resources.

REFEREED JOURNAL ARTICLES

- Silveira, M.L.**, Alleoni, L.R., Change, A.C. 2007. Soil amendments and heavy metal retention and distribution in oxisols treated with biosolids. *Brazilian Journal of Soil Science*. (*In press*).
- Silveira, M.L.**, Comerford, N.B., Reddy, K.R., Cooper, W.T., El-Rifai H. 2008. Characterization of soil organic carbon pools by acid hydrolysis. *Geoderma*, 144:405-414.
- Silveira, M.L.**, Haby, V.A., and Leonard, A. 2006. Response of Coastal bermudagrass yield and nutrient uptake efficiency to N sources. *Agronomy Journal* 99:707-714.
- Silveira, M.L.**, Chang, A.C., Alleoni, L.R.F., and O'Connor, G.A. 2006. Metal-associated forms and speciation in biosolids-amended Oxisols. *Communications in Soil Science and Plant Analysis* 38:851-869.
- Silveira, M.L.**, Alleoni, L.R.F., O'Connor, G.A., and Chang, A.C. 2006. Heavy metal sequential extraction method - A modification for tropical soils. *Chemosphere*, 64:1929-1938.
- Silveira, M.L.**, Miyittah, M., and O'Connor, G.A. 2006. Phosphorus release from a manure-impacted spodosol: effects of a water treatment residual. *Journal of Environmental Quality*, 35:529-541.
- Silveira, M.L.** 2005. Soil quality for nutrient bioavailability: dissolved organic carbon and bioavailability of N and P as indicators. *Scientia Agricola*, 62:502-508.
- O'Connor, G.A., Brinton, S., and **Silveira, M.L.** 2005. Selection and evaluation of soil amendments to reduce field-edge P losses. *Soil Crop Science Society Florida Proceedings*, 64:22-34.

- Silveira, M.L.A.**, Alleoni, L.R.F., and Guilherme, L.R.G. 2003. Biosolids and heavy metals in soils. *Scientia Agricola*, 60:793-806.
- Silveira, M.L.A.**, and Alleoni, L.R.F. 2003. Adsorption and desorption of Cu in Oxisols. *Brazilian Archives of Biology and Technology*, 46:529-536.
- Silveira, M.L.A.**, Alleoni, L.R.F., Camargo, and O.A., Casagrande, J.C. 2002. Copper adsorption in oxidic soils after removal of organic matter and iron oxides. *Communications in Soil Science and Plant Analysis*, 33:3581-3592.
- Silveira, M.L.A.**, Alleoni, L.R.F., Casagrande, J.C., and Camargo, O.A. 1999. Free energy of copper adsorption reaction in highly weathered Oxisols. *Scientia Agricola*, 56:1117-1122.

NON-REFEREED PUBLICATIONS

Fact Sheets

- Silveira, M.L.**, Vendramini, J.M., Hogue, P.J., and Selph, J.F. 2008. Dealing with High Fertilizer Costs in Forage Production Systems. Florida Cooperative Extension Service, IFAS, University of Florida. (*In press*).
- Mackowiak, C.L., Sartin, J.B., **Silveira, M.L.**, Hanlon E.A. 2008. Enhancing nitrogen fertilizer efficiencies in pastures. Florida Cooperative Extension Service, IFAS, University of Florida. (*In press*).
- Mackowiak, C.L., Blount, A.R., Hanlon, E.A., **Silveira, M.L.**, Adjei, M.B., Myer, R.O. 2008. Getting the most out of bahiagrass fertilization. Florida Cooperative Extension Service, IFAS, University of Florida. (*In press*).
- Vendramini, J.M., Sellers, B.A., Sollenberger, L.E., and **Silveira, M.L.** 2008. Mulato (*Brachiaria sp.*). Florida Cooperative Extension Service, IFAS, University of Florida. AG310. Available at: <http://edis.ifas.ufl.edu/AG310>.
- Newman, Y.C., Mackowiak, C., Mylavaparu, R., **Silveira, M.L.** 2008. Fertilizing and liming forage crops. Florida Cooperative Extension Service, IFAS, University of Florida. AG179. Available at: <http://edis.ifas.ufl.edu/AG179>.
- Racine, D., **Silveira, M.L.**, Jawitz, J. 2007. Cleaning Up Petroleum Releases to Soil Florida Cooperative Extension Service, IFAS, University of Florida. SL 251. Available at: <http://edis.ifas.ufl.edu/SS474>.
- Silveira, M.L.**, Vendramini, J.M., Sollenberger, L.E., Mackowiak, C.L., and Newman, Y.C. 2007. Tissue analysis as a nutrient management tool for bahiagrass pastures. Florida Cooperative Extension Service, IFAS, University of Florida. SL 252. Available at: <http://edis.ifas.ufl.edu/SS475>.

Newsletters/producers magazine

- Silveira, M.L.** 2008. Changes in bahiagrass fertilization. The Cattleman and Livestock Journal, vol. 72, n. 5.
- Silveira, M.L.** 2007. Nitrogen fertilizer sources for forage grasses in Florida. pp. 8-12. The Cattleman and Livestock Journal, vol. 71, n. 11.
- Silveira, M.L.** 2007. Liming forage crops in Florida. pp. 48-49. The Cattleman and Livestock Journal, vol. 71, n. 10.

Non-refereed proceedings

- Vendramini, J.M., **Silveira, M.L.**, Dubeux, J.C.B. Jr., and Sollenberger, L.E. 2007. Environmental Impacts and Nutrient Recycling on Pastures Grazed by Cattle. In: Resende,

- K.T., Teixeira, I.A.M.A., and Berchielli, T.T. (Eds.) Brazilian Society of Animal Science National Meeting, July 24-27, 2007, Jaboticabal, Brazil. p. 139-149.
- Silveira, M.L.** Soil and Water Science Program. Field Day – UF/IFAS Range Cattle Research and Education Center. October 24, 2006.
- Haby, V., Leonard, A., **Silveira, M. L.**, and Stewart, M. 2006. Carbon concentration and uptake by Tifton 85 bermudagrass in five cuttings in 2004. pp. 23-24. *Forage-Livestock Research Progress Report*. Texas A&M University, Overton, TX. Technical Report No. 2006-01.
- Rouquette, F.M. Jr., Kerby, J.L., Nimr, G.H., **Silveira, M.L.**, Haby, V.A., and Smith, G.R. 2006. Fertility regimen descriptions during 37 years of continuous stocking of common and Coastal bermudagrass pastures. pp.37-38. *Forage-Livestock Research Progress Report*. Texas A&M University, Overton, TX. Technical Report No. 2006-01.
- Silveira, M.L.**, Rouquette, F.M. Jr., Kerby, J.L., Nimr, G.H., Haby, V.A., and G.R. Smith. 2006. Changes in soil phosphorus in common and Coastal bermudagrass pastures during 35 years of various stocking and fertility regimens. pp.39-40. *Forage-Livestock Research Progress Report*. Texas A&M University, Overton, TX. Technical Report No. 2006-01.
- Silveira, M.L.**, Rouquette, F.M. Jr., Kerby, J.L., Nimr, G.H., Haby, V.A., and G.R. Smith. 2006. Changes in soil nitrate-nitrogen of common and Coastal bermudagrass pastures subjected to long-term stocking and fertility regimens. pp.41-42. *Forage-Livestock Research Progress Report*. Texas A&M University, Overton, TX. Technical Report No. 2006-01.
- Silveira, M.L.**, Rouquette, F.M. Jr., Kerby, J.L., Nimr, G.H., Haby, V.A., and G.R. Smith. 2006. Changes in soil potassium concentrations in the top 6-inch soil depth in common and Coastal bermudagrass pastures during 35 years of stocking and fertility regimens. pp. 43-44. *Forage-Livestock Research Progress Report*. Texas A&M University, Overton, TX. Technical Report No. 2006-01.
- Silveira, M.L.**, Rouquette, F.M. Jr., Kerby, J.L., Nimr, G.H., Haby, V.A., and G.R. Smith. 2006. Soil depth distribution of phosphorus in Coastal bermudagrass pastures subjected to long-term stocking rates and fertility regimens. pp. 45-46. *Forage-Livestock Research Progress Report*. Texas A&M University, Overton, TX. Technical Report No. 2006-01.
- Silveira, M.L.**, Rouquette, F.M. Jr., Kerby, J.L., Nimr, G.H., Haby, V.A., and G.R. Smith. 2006. Soil depth distribution of nitrate-nitrogen in Coastal bermudagrass pastures subjected to long-term stocking rates and fertility regimens. pp. 47-48. *Forage-Livestock Research Progress Report*. Texas A&M University, Overton, TX. Technical Report No. 2006-01.
- Silveira, M.L.**, Rouquette, F.M. Jr., Kerby, J.L., Nimr, G.H., Haby, V.A., and G.R. Smith. 2006. Soil depth distribution of potassium in common and Coastal bermudagrass pastures under 30 years of grazing at different stocking rates. pp. 49-50. *Forage-Livestock Research Progress Report*. Texas A&M University, Overton, TX. Technical Report No. 2006-01.
- Silveira, M.L.**, Rouquette, F.M. Jr., Kerby, J.L., Nimr, G.H., Haby, V.A., and G.R. Smith. 2006. Soil depth changes in pH in Coastal and common bermudagrass pastures under long-term stocking and fertility management. pp. 51-52. *Forage-Livestock Research Progress Report*. Texas A&M University, Overton, TX. Technical Report No. 2006-01.
- Silveira, M.L.**, Rouquette, F.M. Jr., Kerby, J.L., Nimr, G.H., Haby, V.A., and G.R. Smith. 2006. Magnesium distribution at various soil depths in bermudagrass pastures under continuous stocking for 35 years. pp. 53-54. *Forage-Livestock Research Progress Report*. Texas A&M University, Overton, TX. Technical Report No. 2006-01.
- Silveira, M.L.**, Rouquette, F.M. Jr., Kerby, J.L., Nimr, G.H., Haby, V.A., and G.R. Smith. 2006. Calcium distribution at various soil depths in common and Coastal bermudagrass pastures

under long-term stocking and fertility regimens. pp. 55-56. *Forage-Livestock Research Progress Report*. Texas A&M University, Overton, TX. Technical Report No. 2006-01.

Web publications

- Silveira, M.L.** 2008. Bahiagrass tissue testing. In Focus. Range Cattle REC. February, 2008. Available at <http://rcrec-ona.ifas.ufl.edu/in020108ms.html>
- Silveira, M.L.** 2008. Tissue testing as a management tool to predict P fertilization needs for established bahiagrass pastures. UF/IFAS South Florida Beef and Forage Program. "Article of the Month". January, 2008. Available at <http://sfbfp.ifas.ufl.edu/>
- Silveira, M.L.** 2007. Nitrogen fertilizer sources for forage grasses in Florida. In Focus. Range Cattle REC. June, 2007. Available at <http://rcrec-ona.ifas.ufl.edu/IN071907ms.html/>
- Silveira, M.L.** 2007. Importance of soil pH for forage crops. In Focus. Range Cattle REC. June, 2007. Available at <http://rcrec-ona.ifas.ufl.edu/IN061907ms.htm>
- Silveira, M.L.** 2006 Grassland Sequester Greenhouse Gases Too. Research in Review: Agricultural Communications. Texas A&M University, Overton, TX.

PRESENTATIONS AT PROFESSIONAL MEETINGS

National Meetings

- Obour, A.K., Adjei, M.B., **Silveira, M.L.**, Gallaher, R.N., Rechcigl, J.E. Effects of cattle manure application on bahiagrass yield and phosphorus leaching on a Florida spodosol. *ASA-CSSA-SSSA Annual Meeting*, New Orleans, LA, November 4-8, 2007.
- Obour, A.K., Adjei, M.B., **Silveira, M.L.**, Valencia, E., Rechcigl, J.E. Bahiagrass Yield, Nutritive Value and Phosphorus Uptake as Influenced by Cattle Manure Application Rate and Strategy *Soil and Crop Science Society of Florida Annual Meeting*, West Palm Beach, June 03-05, 2007.
- Silveira, M.L.**, Rouquette, F.M. Jr., Haby, V.A., and Smith, G. Long-Term Effects of Continuous Stocking on Soil P Concentrations in Bermudagrass Pastures. *ASA-CSSA-SSSA Annual Meeting*, Indianapolis, IN, November 12-16, 2006.
- Rouquette, F.M. Jr., **Silveira, M.L.**, Haby, V.A., and Smith, G. Effects of Long-Term Stocking and Fertility Regimens on Soil NO₃-N and Extractable Cation Concentrations in Bermudagrass Pastures. *ASA-CSSA-SSSA Annual Meeting*, Indianapolis, IN, November 12-16, 2006.
- Haby, V.A., **Silveira, M.L.**, and Leonard, A.T. Coastal Bermudagrass Response to N Sources and Rates. *ASA-CSSA-SSSA Annual Meeting*, Indianapolis, IN, November 12-16, 2006.
- Silveira, M.L.**, and O'Connor, G.A. Phosphorus Release from a Manure Impacted Spodosol: Effects of a Water Treatment Residual. *ASA-CSSA-SSSA Annual Meeting*, Salt Lake City, UT, November 6-10, 2005.
- Silveira, M.L.**, Reddy, K. R., and Comerford, N.B. Litter Decomposition and Dissolved Organic Carbon Release in a Forest Ecosystem. *ASA-CSSA-SSSA Annual Meeting*, Seattle, WA, October 31- November 4, 2004.
- Silveira, M.L.**, Alleoni, L.R.F., and Chang, A.C. Effect of pH on Cd Distribution in Oxisols Amended with Biosolids. *ASA-CSSA-SSSA Annual Meeting*, Denver, CO, November 2-6, 2003.
- Silveira, M.L.A.**, Alleoni, L.R.F., and Chang, A.C. Sequential Extraction of Zn in Oxisols from Brazil. *ASA-CSSA-SSSA Annual Meeting*, Indianapolis, IN, November 11-14, 2002.

Guilherme, L.R.G., Chang, A.C., Curi, N, Marques, J.J., **Silveira, M.L.A.** Baseline Concentrations of Arsenic in Oxidic Soils. *ASA-CSSA-SSSA Annual Meeting*, Indianapolis, IN, November 11-14, 2002.

International Meetings

Silveira, M.L.A., Alleoni, L.R.F., and Chang, A.C. Zinc, Copper, and Cadmium Distribution in Biosolids. *29th Brazilian Soil Science Annual Meeting*, Ribeirão Preto, Brazil, July 13-18, 2003.

Silveira, M.L.A., Alleoni, L.R.F., and Chang, A.C. Iron Oxides Dissolution from Oxisols for Metal Sequential Extraction Procedures. *25th Soil Fertility and Plant Nutrition Brazilian Meeting*, Rio de Janeiro, Brazil, September 09-12, 2002.

Silveira, M.L.A., Alleoni, L.R.F., Casagrande, J.C., and Camargo, O.A. Removal of Organic Matter and Iron Oxides versus Copper Adsorption in Highly-weathered Soils. *6th International Conference on the Biogeochemistry of Trace Elements*, Canada, July 20-August 02, 2001.

AWARDS AND HONORS

2001-2002: Scholarship-CAPES, Brazil to support doctoral research at University of California, Riverside.

1999-2001: Scholarship-CAPES, Brazil (PhD).

1997-1999: Scholarship-FAPESP, Brazil (MS).

1994-1995: Scholarship-FUNDAP, Brazil as a part of project supported by Kellogg-DRI.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Soil Science Society of America

Crop Science Society of America

Brazilian Soil Science Society