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Education

Ph.D., Soil Science, Federal University of Parana (Brazil), 2023.

M.S., Soil Science, Federal University of Parana (Brazil), 2019.

B.S., Agronomy, Federal University of Santa Catarina (Brazil), 2017.

Professional experience

Assistant Professor, Department of Plant and Soil Sciences, University of Kentucky, August 2025 to present. Concentration area: Soil Sciences, 80% DOE extension and 20% DOE research.

Postdoctoral Scholar, Department of Horticulture & Crop Science, The Ohio State University, March 2023 to July 2025.

Visiting Scholar Research Assistant, Department of Horticulture & Crop Science, The Ohio State University, March 2021 to February 2023.

Graduate (Ph.D.) Research Assistant, Department of Soil Science and Agricultural Engineering, Federal University of Parana (Brazil), March 2019 to February 2021.

Graduate (M.S.) Research Assistant, Department of Soil Science and Agricultural Engineering, Federal University of Parana (Brazil), February 2017 to February 2019.

Undergraduate Research Assistant, Brazilian Agricultural Research Corporation (EMBRAPA) - National Center of Soybean Research, July 2016 to December 2016.

Undergraduate Research Assistant, Agricultural and Biological Sciences Center, Federal University of Santa Catarina (Brazil), August 2012 to June 2016.

Funded Research (total \$598,177)

Chiavegato, M.B., Matcham, E.G., Essman, A., **Ribeiro, R.H.**, Otaviano, E.K.S., Gelley, C., Sbrissia, A.F. Mimicking Nature: Establishment Protocols for Warm- and Cool-Season Grass Mixtures. Greenacres Foundation – Regenerative Agriculture Research Grants. (\$280,320). 2025-2028.

Chiavegato, M.B., **Ribeiro, R.H.** Long-term effects of co-composted biochar on soil health, crop yields, and greenhouse gas emissions in an integrated crop-livestock system. Greenacres Foundation – Regenerative Agriculture Research Grants. (\$317,857). 2023-2026.

Peer-reviewed selected publications (last 5 years) – total documents: 35, total citations: 170.

Besen, M.R., **Ribeiro, R.H.**, Cassim, B.M.A.R., Goes Neto, A.F., de Almeida Junior, J.H.V., Inoue, T.T., Batista, M.A. (2024). Biometric Parameters and Yield Components of Wheat (*Triticum aestivum*) as a Function of Lime and Phosphogypsum Reapplication. *Communications in Soil Science and Plant Analysis*. <https://doi.org/10.1080/00103624.2024.2418328>.

Besen, M.R., **Ribeiro, R.H.**, Bratti, F., Locatelli, J.L., Schmitt, D.E., Piva, J.T. (2024). Cover cropping associated with no-tillage system promotes soil carbon sequestration and increases crop yield in Southern Brazil. *Soil and Tillage Research*. <https://doi.org/10.1016/j.still.2024.106162>

Miquilini, M., **Ribeiro, R.H.**, Lyon, S.W., Chiavegato, M.B. (2024). Higher apical meristem in tall fescue as adaptation strategy to recurring short-term inundation in Ohio. *Agrosystems, Geosciences & Environment*. <https://doi.org/10.1002/agg2.20486>

Ribeiro, R.H., Miquilini, M., Lyon, S.W., Dieckow, J. & Chiavegato, M.B. (2023). Inundation impacts on diversified pasture biomass allocation and soil particulate organic matter stocks. *Grass and Forage Science*. <https://doi.org/10.1111/gfs.12643>

Santos, E.L., **Ribeiro, R.H.**, Ramalho, B., Bratti, F., Alievi, C. & Debiassi, H. (2023). Soybean off-season management practices: impacts on physical and chemical soil properties and crop yield. *Revista Ceres*. <https://doi.org/10.1590/0034-737X202370050020>

- Piva, J.T., Schmitt, D.E., Fioreze, S.L., Guginski-Piva, C.A., **Ribeiro, R. H.** & Besen, M.R. (2023). *Azospirillum brasilense* inoculation and nitrogen fertilization in a 3-year maize and black oat yield in succession. *Revista Ceres*. <https://doi.org/10.1590/0034-737X202370030003>
- Ribeiro, R.H.**, Ibarra, M.A., Bratti, F., Pinheiro, D., Auler, A.C., Chiavegato, M.B., Dieckow, J. (2023). Grazing intensity and nitrogen fertilization effects on biomass and morphology of black oat roots in an integrated crop–livestock system. *Agronomy Journal*. <https://doi.org/10.1002/agj2.21277>
- Bratti, F., Locatelli, J.L., **Ribeiro, R.H.**, Besen, M.R., Dieckow, J., Bayer, C. & Piva, J.T. (2022). Nitrous oxide and methane emissions affected by grazing and nitrogen fertilization in an integrated crop-livestock system. *Geoderma*. <https://doi.org/10.1016/j.geoderma.2022.116027>
- Besen, M.R., **Ribeiro, R.H.**, Esper Neto, M., Minato, E.A., Coneglian, C. F., Kachinski, W. D., Batista, M. A. (2021). Lime and phosphogypsum application management: changes in soil acidity, sulfur availability and crop yield. *Revista Brasileira de Ciência do Solo*. <https://doi.org/10.36783/18069657rbs20200135>
- Besen, M.R., **Ribeiro, R.H.**, Bayer, C. & Piva, J.T. (2021). Nitrous oxide emissions from enhanced-efficiency nitrogen fertilizers applied to annual crops in a subtropical ecosystem. *Nutrient Cycling in Agroecosystems*. <https://doi.org/10.1007/s10705-021-10161-6>
- Piva, J.T., Bratti, F., Locatelli, J.L., **Ribeiro, R.H.**, Besen, M.R., Brancaloni, E. & Schmitt, D.E. (2021). Use of winter cover crops improves maize productivity under reduced nitrogen fertilization: a long-term study. *Bragantia*. <https://doi.org/10.1590/1678-4499.20200165>
- Besen, M.R., **Ribeiro, R.H.**, Minato, E.A., Batista, M.A., Bayer, C. & Piva, J. T. (2021). Modelling of N₂O emissions from a maize crop after the application of enhanced-efficiency nitrogen fertilizers. *Communications in Soil Science and Plant Analysis*. <https://doi.org/10.1080/00103624.2021.1892724>
- Ribeiro, R.H.**, Ibarra, M.A., Besen, M.R., Bayer, C. & Piva, J.T. (2020). Managing grazing intensity to reduce the global warming potential in integrated crop-livestock systems under no-till agriculture. *European Journal of Soil Science*. <https://doi.org/10.1111/ejss.12904>

- Besen, M.R., **Ribeiro, R.H.**, Bratti, F., Locatelli, J.L. & Piva, J.T. (2020). Does nitrogen application timing and sources influence barley grain yield? *Scientia Agraria Paranaensis*, 19(3). <https://doi.org/10.18188/sap.v19i3.24011>
- Demetrio, W.C., **Ribeiro, R.H.**, Nadolny, H., Bartz, M.L.C. & Brown, G.G. (2020). Earthworms in Brazilian no-tillage agriculture: Current status and future challenges. *European Journal of Soil Science*. <https://doi.org/10.1111/ejss.12918>
- Locatelli, J.L., Bratti, F., **Ribeiro, R.H.**, Besen, M.R., Brancaloni, E. & Piva, J.T. (2020). Soil carbon sequestration and stocks: short-term impact of maize succession to cover crops in Southern Brazil Inceptisol. *Spanish Journal of Agricultural Research*. <https://doi.org/10.5424/sjar/2020183-16255>
- Simon, P.L., Dieckow, J., Zanatta, J.A., Ramalho, B., **Ribeiro, R.H.**, van der Weerden, T. & de Klein, C.A.M. (2020). Does *Brachiaria humidicola* and dicyandiamide reduce nitrous oxide and ammonia emissions from cattle urine patches in the subtropics? *Science of the Total Environment*. <https://doi.org/10.1016/j.scitotenv.2020.137692>
- Ribeiro, R.H.**, Dieckow, J., Piva, J.T. & Bratti, F. (2020). Roots and aboveground carbon and nitrogen inputs by black oats (*Avena strigosa* Schreb.) as affected by grazing and nitrogen in integrated crop-livestock system in subtropical Brazil. *Plant and Soil*. <https://doi.org/10.1007/s11104-020-04542-z>
- Ribeiro, R.H.**, Besen, M.R., Simon, P.L., Bayer, C. & Piva, J.T. (2020). Enhanced-efficiency nitrogen fertilizers reduce winter losses of nitrous oxide, but not of ammonia, from no-till soil in a subtropical agroecosystem. *Soil Use and Management*. <https://doi.org/10.1111/sum.12575>

Extension publications (last 5 years)

- Mammana, A.F. Otaviano, E.K.S, Ribeiro, R.H. & Chiavegato, M. (2025). Maximizing Forage Quality Through Targeted Grazing of Native Warm-Season Grasses. ANR-0166, The Ohio State University – Extension.
- Ribeiro, R.H. & Chiavegato, M.B. (2023). Enhanced Soil Carbon Farming as a Climate Solution: Pastures and Hayfields in Ohio. Agronomic Crops Network - Crop Observation

Recommendation Network (C.O.R.N.), Electronic Newsletter Article, Columbus, Ohio, United States.

Essman, A. & Ribeiro, R.H. (2023). Cressleaf groundsel scouting. Agronomic Crops Network - Crop Observation Recommendation Network (C.O.R.N.), Electronic Newsletter Article, Columbus, Ohio, United States.

Balbinot Junior, A.A., Hirakuri, M.H., Franchini, J.C., Debiasi, H. & Ribeiro, R.H. (2017). Analysis of area, production and yield of soybean cultivated in Brazil in the last two decades (1997-2016). (Original in Portuguese). Brazilian Agricultural Research Corporation (EMBRAPA) - Boletim de Pesquisa e Desenvolvimento Volume 11, 22p. Technical report for research and development, EMBRAPA - National Center of Soybean Research.

Extension presentations (last 5 years)

Ribeiro, R.H. & Chiavegato, M.B. (2024). Grazing management strategies to increase soil carbon sequestration and soil health. Southern Ohio Grazing Council. May 16, 2024. Hillsboro, Ohio, United States. (~40 attendees).

Chiavegato, M.B, **Ribeiro, R.H.**, Otaviano, E.K.S., Mammana, A.F., Salsbury, L. & Stachler, C. (2024). Research of forage science and implications for animals. We Grow Scientists. College of Food, Agriculture and Environmental Sciences, The Ohio State University and COSI Community STEAM events. May 1st, 2024 Columbus, Ohio, United States. (~550 attendees: K1-12 kids and their parents).

Ribeiro, R.H. & Chiavegato, M.B. (2024). Soil Carbon Stocks Under Perennial Pastures and Hayfields: On-farm Assessment in Ohio. Ohio Forage and Grassland Council Conference. Feb. 9, 2024. Cambridge, Ohio, United States. (~40 attendees).

Ribeiro, R.H., Miquilini, M. & Chiavegato, M.B. (2022). Soil carbon in flooded and non-flooded pasture fields in Southern Ohio. Ohio Forage and Grassland Council Conference. Feb. 18, 2022. London, Ohio, United States. (~40 attendees).

Chiavegato, M.B., **Ribeiro, R.H.** & Miquilini, M. (2022). Native warm-season grasses implementation protocols. Ohio Forage and Grassland Council Conference. Feb. 18, 2022. London, Ohio, United States. (~40 attendees).