

Márcio R. Nunes

Curriculum Vitae

University of Florida
Soil, Water & Ecosystem Sciences
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Google Scholar: <https://scholar.google.com/citations?user=fVVsZKgAAAAJ&hl=pt-BR>

ResearchGate: <https://www.researchgate.net/profile/Marcio-Nunes-4>

LinkedIn: www.linkedin.com/in/marcio-r-nunes

SUMMARY

Dr. Marcio Nunes has been conducting sustainable agricultural research for more than 10 years. Since 2014, He has published 40 refereed journal articles and book chapters focusing on agricultural and environmental science and soil health in both tropical and temperate soils. His research has been recognized for its high impact and helped establish improved soil health assessment and scoring methods.

AREAS OF EXPERTISE

- Soil Health
- Soil Physics
- Tropical Soils
- Cover Cropping
- Soil Management
- Soil Organic Carbon
- Agricultural Systems
- Sustainable Agriculture
- Crop Residue Management

EDUCATION

- Postdoctoral Research Associate**, USDA-ARS, Ames, IA, USA **2018 – 2022**
National Laboratory for Agriculture and the Environment
Supervisor(s): Dr. Doug Karlen; Cynthia A. Cambardella; Dr. Kristen S. Veum
- Ph.D. in Soil and Plant Nutrition**, University of São Paulo (USP), Brazil **2014-2018**
(1-year period at Cornell University, Ithaca, NY, USA)
Dissertation: “*Structure of highly weathered soils cultivated under no-tillage systems*”
Advisor: Dr. Alvaro P. da Silva (University of São Paulo)
Co-Advisor: Dr. Harold M. van Es (Cornell University)
- M.S. in Soil Management**, Federal University of Pelotas, Brazil **2012-2014**
Thesis: “*Mitigation of clayey soil compaction managed under no-tillage*”
Advisor: Dr. Eloy A. Pauletto (Federal University of Pelotas)
Co-Advisor: Dr. José E. Denardin (EMBRAPA)
- B.S. in Agronomy**, Federal University of Pelotas, Brazil **2007-2011**
- Agricultural Technician**, Federal Institute, Bento Gonçalves, Brazil **2005-2007**

PROFESSIONAL EXPERIENCE

Assistant Professor, University of Florida Soil and Water Sciences Dept. (USA)	2022 – Present
Postdoctoral Research Associate, USDA-ARS Natl. Lab for Ag. and the Environ. (USA)	2018 – 2022
Visiting Fellow, Cornell University, Soil and Crop Sciences Dept. (USA)	2017 – 2018
Research Assistant, University of São Paulo, Soil Sciences Dept. (Brazil)	2014 – 2017
Teaching Assistant, University of São Paulo, Soil Sciences Dept. (Brazil)	2015 – 2016
Visiting Scientist, Embrapa Instrumentation, Soil Sciences (Brazil)	2016 – 2017
Visiting Scientist, Embrapa Wheat, Soil Sciences (Brazil)	2012 – 2016
Research Assistant, Federal University of Pelotas, Soil Sciences Dept. (Brazil)	2007 – 2011
Intern, Embrapa Wheat, Soil Sciences (Brazil)	2006 – 2007

HONORS and AWARDS

Excellence in Writing and Communication	2016
The <i>European Geosciences Union</i> selected my article as a <i>Top-30</i> publication in the <i>Top-10 Soil Science</i> journals. <i>Nunes et al. (2015). Mitigation of clayey soil compaction managed under no-tillage. Soil Tillage Res. 148: 119-126</i>	
Best Poster	2008
At the Scientific Initiation Congress, Catholic University of Pelotas, Pelotas, Brazil.	
Scholarship, FAPESP, Brazil (Ph.D. abroad)	2017 – 2018
Scholarship, FAPESP, Brazil (Ph.D.)	2014 – 2017
Scholarship, CAPES, Brazil (M.S.)	2012 – 2014
Scholarship, CNPq, Brazil (B.S.)	2007 – 2011

RESEARCH PROJECT – PARTICIPATION

2018 – Present

Title: *Soil Management Assessment Framework meta-analysis for indicator interpretation and tool development for use by NRCS Conservation Planners.* **Funding:** USDA-NRCS, Agreement Number: 67-3A75-17-391.

2013 – 2019

Title: *Improvement, innovation, and development of knowledge and technologies for no-till systems.* **Funding:** Brazilian Agricultural Research Corporation (EMBRAPA).

2017 – 2018

Title: *Evaluating the influence of soil mineralogy and organic matter quality on the structural degradation of oxisols under no-till using advanced and non-conventional techniques.* **Funding:** São Paulo Research Foundation (FAPESP), Agreement Number: 2017/01522-1.

2015 – 2018

Title: *Factors promoting clayey soil structure degradation under no-tillage.* **Funding:** FAPESP, Agreement Number: 2015/129343.

2009 – 2012

Title: *Soil quality improvement under no-till systems in the Brazilian Subtropical region.* **Funding:** EMBRAPA.

2007 – 2011

Title: *Long-term physical, chemical and microbiological improvement of a constructed soil after coal mining*
Funding: Brazilian Research Council (CNPq).

FUNDED GRANTS

- G.3 **Nunes MR** et al. (2017). *Evaluating the influence of soil mineralogy and organic matter quality on the structure of Oxisols using advanced and non-conventional techniques*. Funded by São Paulo Research Foundation, FAPESP (\$27,000).
- G.2 **Nunes MR** et al. (2015). *Factors promoting soil structural degradation under no-till systems*. Funded by São Paulo Research Foundation, FAPESP (\$40,000).
- G.1 Denardin JE et al. (2013). *Improvement, innovation, and development of knowledge and technologies for no-till system*. Funded by the Brazilian Agricultural Research Corporation, EMBRAPA (\$1M).

PEER-REVIEWED PUBLICATIONS

BOOK CHAPTERS

(Total: 3)

- BC.3 Veum KS, **Nunes MR**, Sudduth KA. 2021. The future of in-field soil health assessments: Tools and strategies. In: *Approaches to Soil Health Analysis*. D.L. Karlen, D.E. Stott, and M.M. Mikha (eds). Madison, WI, USA, John Wiley & Sons, Inc. <https://doi.org/10.1002/9780891189817.ch8>
- BC.2 Acosta-Martinez V, Perez-Guzman L, Veum KS, **Nunes MR**, Dick R. 2021. Metabolic activity – Enzymes. In: *Laboratory Methods for Soil Health Analysis*. D.L. Karlen, D.E. Stott, and M.M. Mikha (eds). Madison, WI, USA, John Wiley & Sons, Inc. <https://doi.org/10.1002/9780891189831.ch11>
- BC.1 Veum KS, Acosta-Martinez V, Kucera M, **Nunes MR**. 2021. Microbial community composition – PLFA. In: *Laboratory Methods for Soil Health Analysis*. D.L. Karlen, D.E. Stott, and M.M. Mikha (eds). Madison, WI, USA, John Wiley & Sons, Inc. <https://doi.org/10.1002/9780891189831.ch12>

JOURNAL ARTICLES

Published/accepted/in review

(Total: 40)

- J.40 Moreira SG, Hoogenboom G, **Nunes MR**, Martin-Ryals AD, Sanchez PA. 202x. Circular Agriculture Increases Food Production and Nitrogen Recovery in Commercial Farms. *Science of the Total Environment* (in review).
- J.39 Moreira SG, ... **Nunes MR**, Sanchez PA. 202X. Humic acid combined with phosphorus and micronutrient supply methods and extractable phosphorus in tropical environments. *Plant and Soil* ([in review](#)).
- J.38 Bonetti JA, **Nunes MR**, Tormena CA. 202x. Agricultural conservation practices to improve soil health and crop yield: An on-farm study in tropical soils. *Soil & Tillage Research* (in review).
- J.37 Batista AM, **Nunes MR**, Pessoa TN, Libardi PL. 202x. Seasonal variation of the rhizosphere soil aggregation in an Oxisol. *Soil & Tillage Research* ([in review](#)).
- J.36 Moraes FA, Moreira SG, Peixoto DS, Silva JCR, Macedo JR, Silva MM, Silva BM, **Nunes MR**, Sanchez PA. 202X. Deep liming increases the root growth and crop yield in Oxisols. *Soil & Tillage Research* ([in review](#)).
- J.35 Ferreira CJB, Tormena CA, Severiano EC, **Nunes MR**, Menezes CCE. 202x. Surface soil compaction mitigation under no-till using seeder with chisel furrow opening tools. *Soil & Tillage Research* (in review)

- J.34 Pinheiro EA, **Nunes MR** et al. 202x. Agro-hydrological simulations of cropping systems in a tillage chronosequence under subtropical weather. *Soil & Tillage Research* (*in review*).
- J.33 Suzuki LEAS, Amaral RL, Almeida WRC, Ramos MF, **Nunes MR**. 202x. Oat mulching reduces soil erosion and nutrient losses by runoff in a peach orchard. *Revista de Ciências Agroambientais*. (*in review*).
- J.32 O'Brian PL, Emmert BD, Malone RW, **Nunes MR**, Kovar JL, Kaspar TC, Moorman TB, Jaynes DB, Parkin TB. 2022. Nitrate losses and nitrous oxide emissions under contrasting tillage and cover crop management. *Journal of Environmental Quality* (IF: 2.75). <https://doi.org/10.1002/jeq2.20361>
- J.31 Vaz CMP, Resende JM, Santos JCF, Debiase H, **Nunes MR**. 2022. Evaluation and recommendations for the use of dynamic penetrometers. *Soil & Tillage Research* 220: 105373 (IF: 5.37). <https://doi.org/10.1016/j.still.2022.105373>
- J.30 Pessoa TN, Cooper M, **Nunes MR**, Uteau-Pusshmanc D, Peth S, Vaz CMP, Libardi PL. 2022. 2D and 3D image techniques to assess the structure and porosity of Oxisols and their relationship with other soil properties and processes. *Catena* 210: 105899 (IF: 5.20). <https://doi.org/10.1016/j.catena.2021.105899>
- J.29 Sarto MVM, Borges WLB, Bassegio D, **Nunes MR**, Rice C, Rosolem CA. 2022. Deep soil water content and forage production in a tropical agroforestry system. *Agriculture* 12: 359 (IF: 2.93). <https://doi.org/10.3390/agriculture12030359>
- J.28 **Nunes MR**, Vaz CMP, Pessoa TN, Denardin JE, Karlen DL, Giarola NFB, Libardi PL. 2021. Inherent and dynamic effects on structural stability of Brazilian Oxisols. *Geoderma Regional* 27: e00426 (IF: 2.81). <https://doi.org/10.1016/j.geodrs.2021.e00426>
- J.27 **Nunes MR**, De M, McDaniel M, Kovar JL, Birrell SJ, Karlen DL. 2021. Science-based maize stover removal can be sustainable. *Agronomy Journal* 113: 3178-3192 (IF: 2.24). <https://doi.org/10.1002/agj2.20724>
- J.26 **Nunes MR**, Lima RP, Tormena CA, Karlen DL. 2021. Corn seedling root growth response to soil physical quality. *Agronomy Journal* 113: 3135-3146 (IF: 2.24). <https://doi.org/10.1002/agj2.20705>
- J.25 **Nunes MR**, Veum KS, Parker PA, Holan S, Karlen DL, Amsili JP, van Es HM, Wills SA, Seybold CA, Moorman TB. 2021. The Soil Health Assessment Protocol and Evaluation applied to soil organic C. *Soil Science Society of America Journal*. 85: 1196– 1213 (IF: 2.31). <https://doi.org/10.1002/saj2.20244>
- J.24 Li C, Veum KS, Goynes KW, **Nunes MR**, Acosta-Martinez V. 2021. A chronosequence of soil health under tallgrass prairie reconstruction. *Applied Soil Ecology* 164: 103939. (IF: 4.05). <https://doi.org/10.1016/j.apsoil.2021.103939>
- J.23 Suzuki LEAS, Bordin SS, Matieski T, Rostirolla P, Strieder G, Lima LSC, **Nunes MR**. 2021. Soil and nutrient losses by runoff from farmlands in Brazil. *Revista de Ciências Agroambientais* 19: 1-15. <https://doi.org/10.30681/rcaa.v19i1.4967>
- J.22 Li L, Jin VL, Kettler T, Karlen DL, **Nunes MR**, Lehman M, Johnson JMF, Mikha MM. 2021. Decreased land use intensity improves soil quality on marginal lands. *Agrosystems, Geosciences & Environment* 4: e20226. <https://doi.org/10.1002/agg2.20226>
- J.21 Bitencurt D, Suzuki LEAS, Pauletto EA, Bamberg AL, **Nunes MR**, Perazzoli D. 2021. Soil structure and available water of an Inceptisol submitted to periods of rotation grazing. *Agroamazon* 1: 50-59. Disponível em: <https://agroamazon.ufra.edu.br/index.php?journal=agroamazon&page=article&op=view&path%5B%5D=65>

- J.20 **Nunes MR**, Karlen DL, Moorman TB. 2020. Tillage intensity effects on soil structure: A U.S. meta-analysis. *Sustainability* 12: 1-17. (IF: 3.25) <https://doi.org/10.3390/su12052071>
- J.19 van Es HM, Ristow AJ, **Nunes MR**, Schindelbeck R, Sela S, Davis M. 2020. Nitrate leaching reduced with Dynamic-Adaptive nitrogen management under contrasting soils and tillage. *Soil Science Society of America Journal* 84: 220-231. (IF: 2.31) <https://doi.org/10.1002/saj2.20031>
- J.18 **Nunes MR**, Karlen DL, Veum KS, Moorman TB, Cambardella CA. 2020. Biological soil health indicators respond to tillage intensity: A US meta-analysis. *Geoderma* 369: 114335. (IF: 6.11). <https://doi.org/10.1016/j.geoderma.2020.114335>
- J.17 **Nunes MR**, Karlen DL, Veum KS, Moorman TB. 2020. A SMAF assessment of U.S. tillage and crop management strategies. *Environmental & Sustainability Indicators* 8: 100072. <https://doi.org/10.1016/j.indic.2020.100072>
- J.16 **Nunes MR**, Karlen DL, Moorman TB, Cambardella CA. 2020. How does tillage intensity affect chemical soil health indicators? A United States meta-analysis. *Agrosystems, Geosciences & Environment* 3: e20083. <https://doi.org/10.1002/agg2.20083>
- J.15 **Nunes MR**, van Es HM, Veum KS, Amsili JP, Karlen DL. 2020. Anthropogenic and inherent effects on soil organic carbon across the U.S. *Sustainability* 12: 5695. (IF: 3.25) <https://doi.org/10.3390/su12145695>
- J.14 Karlen DL, Veum KS, Sudduth KA, Obrycki JF, **Nunes MR**. 2019. Soil health assessment: Past accomplishments, current activities, and future opportunities. *Soil & Tillage Research* 195: 10436. (IF: 5.37). <https://doi.org/10.1016/j.still.2019.104365>
- J.13 **Nunes MR**, Karlen DL, Denardin JE, Cambardella CA. 2019. Corn root and soil health indicator response to no-till production practices. *Agriculture Ecosystem & Environment* 285: 106607. (IF: 5.57) <https://doi.org/10.1016/j.agee.2019.106607>
- J.12 **Nunes MR**, Pauletto EA, Denardin JE, Suzuki LEAS, van Es HM. 2019. Dynamic changes in compressive properties and crop response after chisel tillage in a highly weathered soil. *Soil & Tillage Research* 186: 183-190. (IF: 5.37) <https://doi.org/10.1016/j.still.2018.10.017>
- J.11 **Nunes MR**, Denardin JE, Vaz CMP, Karlen DL, Cambardella CA. 2019. Lime movement through highly weathered soil profiles. *Environmental Research Communications* 1. (IF: 2.10) <https://doi.org/10.1088/2515-7620/ab4eba>
- J.10 **Nunes MR**, van Es HM, Schindelbeck R, Ristow AJ, Ryan M. 2018. No-till and cropping system diversification improve soil health and crop yield. *Geoderma* 328: 30-43. (IF: 6.11) <https://doi.org/10.1016/j.geoderma.2018.04.031>
- J.9 **Nunes MR**, Vaz CMP, Denardin JE, van Es HM, Libardi PL, Silva AP. 2017. Physicochemical and structural properties of an Oxisol under the addition of straw and lime. *Soil Science Society of America Journal* 81: 1328-1339. (IF: 2.31) <https://doi.org/10.2136/sssaj2017.07.0218>
- J.8 **Nunes MR**, Silva AP, Denardin JE, Giarola NFB, Vaz CMP, van Es HM. 2017. Soil chemical management drives structural degradation of Oxisols under a no-till cropping system. *Soil Research* 55: 819-831. (IF: 1.99) <https://doi.org/10.1071/SR17063>

- J.7 Franco HHS, Silva AP, Tormena CA, Ferreira CJB, **Nunes MR**, Lima RP, Libardi PL. 2017. Porous cup shape and installation mode influencing determinations of matric potential by tensiometers. *Pesquisa Agropecuária Brasileira* 52: 1291-1294. (IF: 1.10) <http://dx.doi.org/10.1590/s0100-204x2017001200019>
- J.6 **Nunes MR**, Denardin JE, Pauletto EA, Faganello A, Pinto LFS. 2015. Mitigation of clayey soil compaction managed under no-tillage. *Soil & Tillage Research*, 148:119-126. (IF: 5.37) <https://doi.org/10.1016/j.still.2014.12.007>
- J.5 **Nunes MR**, Denardin JE, Pauletto EA, Faganello A, Pinto LFS. 2015. Effect of soil chiseling on soil structure and root growth for a clayey soil under no-tillage. *Geoderma* 259: 149-155. (IF: 6.11) <https://doi.org/10.1016/j.geoderma.2015.06.003>
- J.4 Stumpf L, Pauletto EA, Castro RC, Pinto LFS, Fernandes FF, Silva TS, Ambus JV, Garcia GF, Lima, CLR, **Nunes MR**. 2014. Capability of grass in recovery of a degraded area after coal mining. *Agrociencia* 48: 477-487. (IF: 0.41) http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S1405-31952014000500002&lng=es&tlng=en
- J.3 **Nunes MR**, Pauletto EA, Denardin JE, Faganello A, Pinto LFS, Scheunemann T. 2014. Persistence of chiseling effects on the compaction of a Nitisol under no-till in a humid subtropical region. *Pesquisa Agropecuária Brasileira* 49: 531-539. (IF: 1.10) <http://dx.doi.org/10.1590/S0100-204X2014000700005>
- J.2 **Nunes MR**, Denardin JE, Faganello A, Pauletto EA, Pinto LFS. 2014. Effect of seed drill with fixed shanks for deep action in soil under no-till. *Brazilian Journal of Soil Science* 38: 627-638. (IF: 1.68) <https://doi.org/10.1590/S0100-06832014000200027>
- J.1 Botelho MR, Pinto LFS, Lima ACR, **Nunes MR**. 2014. Characterization and classification of soils with dark subsurface horizons derived from granite rocks in the Sul-Rio-Grandense Shield, Brazil. *Brazilian Journal of Soil Science* 38: 1066-1076. (IF: 1.68) <https://doi.org/10.1590/S0100-06832014000400003>

In Preparation (Mature manuscripts are available to be shared upon request)

(Total: 3)

- IP.3 Moreira SG, Hoogenboom G, **Nunes MR**, Sanchez PA. 202x. Circular Agriculture Practices Increases Potassium Recovery in Tropical (Target Journal: *Agriculture, Ecosystems and Environment*).
- IP.2 **Nunes MR**, Veum KS, Parker PA, Holan S, Karlen DL, Amsili JP, van Es HM, Wills SA, Seybold CA. 202x. The Soil Health Assessment Protocol and Evaluation applied to the labile fractions of soil organic matter. (Target Journal: *Soil Science Society of America Journal*).
- IP.1 Moreira SG, Hoogenboom G, **Nunes MR**, Sanchez PA. 202x. Can Circular Agriculture Practices Enhance Phosphorus Recovery under Tropical Conditions? (Target Journal: *The Journal of Agricultural Science*).

INVITED TALK

- IT.6 **Nunes MR*** (2021). Integrating Dynamic and Inherent Factors to Improve Soil Health Interpretation. Invited talk at the *AGU Fall Meeting 2021*.
- IT.5 **Nunes MR***, Delate K, Karlen DL (2021). Soil Health Assessment of Organic Production Systems: A Cynthia Cambardella Legacy. Invited talk at the *ASA, CSSA and SSSA Annual Meeting, Salt Lake City, UT*.

IT.4 **Nunes MR*** (2021). SHAPE: A New Soil Health Interpretation Tool. Invited talk at the *Soil Health Institute Annual Meeting*, 2021.

IT.3 **Nunes MR*** (2019). The Soil Management Assessment Framework (SMAF) for soil health assessment. Invited talk at the *NutriNet Research Group Meeting*, ASA, CSSA and SSSA International Annual Meetings, 2019, San Antonio, TX, USA (Bonham Hotel).

IT.2 **Nunes MR***, van Es HM, Schindelbeck R, Ristow AJ (2017). Improvement of soil health under cropping systems. Invited talk at the *Northeast Cover Crop Council First Annual Meeting*, 2017, Ithaca, NY, USA (Cornell University).

IT.1 **Nunes MR*** (2016). Factors promoting soil structure degradation under no-till systems. Invited talk at the *Embrapa Annual Workshop*. 2016, Passo Fundo, RS, Brazil (EMBRAPA).

TEACHING EXPERIENCE

Guest Lecturer at University of São Paulo, Brazil **Spring 2021**
Course Name: Soil Quality - Graduation in Soils and Plant Nutrition (M.S. and Ph.D. degree)

Guest Lecturer at Federal Rural University of Pernambuco, Brazil **Fall 2020**
Course Name: Seminars - Graduation in Agricultural Engineering (M.S. and Ph.D. degree)

Teaching Assistant at University of São Paulo, Brazil **Fall 2016**
Course Name: Soil Physics (LS00310) – B.S. in Agronomy

Teaching Assistant at University of São Paulo, Brazil **Fall 2015**
Course Name: Soil Physics (LS00310) – B.S. in Agronomy

Guest Lecturer at Federal University of Pelotas, Brazil **Spring 2013**
Course Name: Soil Management and Conservation (01230021) – B.S. in Agronomy

Teaching Assistant at Federal University of Pelotas, Brazil **2008 – 2011**
Course Name: Soil Physics (01230019) – B.S. in Agronomy

MENTORING and SUPERVISING EXPERIENCE

Embrapa Instrumentation, Brazil **2016 – 2017**
Co-supervised 3 undergraduate students (Scientific Initiation Program).

Ph.D. DISSERTATION COMMITTEE (CO-ADVISOR)

State University of Ponta Grossa, Brazil **2021 – Present**
Ph.D. candidate: Renann R. da Silva
Major Advisor: Dr. Carolina W. Galvão
Dissertation title: Development of a soil health interpretation tool for subtropical region.

Ph.D. Dissertation Committee (examiner)

State University of Ponta Grossa, Brazil **2021**
Ph.D. candidate: Lucia Helena Wiecheteck
Major Advisor: Dr. Neyde F. B. Giarola
Dissertation title: Biochar and limestone as conditioners of cultivated soils.

Ph.D. candidate: Maxsuelen Rodrigues Soares

Major Advisor: Dr. Carlos M. P. Vaz

Dissertation title: Extraction and characterization of mineral soil nanoparticles and its rule on nutrient sorption and soil structure.

CONTRIBUTED CONFERENCE/MEETING PRESENTATIONS

ORAL

(Total: 18)

- IT.18 **Nunes MR.** Integrating Dynamic and Inherent Factors to Improve Soil Health Interpretation. Invited talk at the *AGU Fall Meeting 2021*.
- OP.17 **Nunes MR,** Delate K, Karlen DL. Soil Health Assessment of Organic Production Systems: A Cynthia Cambardella Legacy. Invited talk at the *ASA, CSSA and SSSA Annual Meeting, Salt Lake City, UT, 2021*.
- OP.16 **Nunes MR.** SHAPE: A New Soil Health Interpretation Tool. *Soil Health Institute Annual Meeting, 2021*.
- OP.15 Veum KS, **Nunes MR** et al. The Soil Health Assessment Protocol and Evaluation (SHAPE). Invited presentation at the *Soil and Water Conservation Society annual meeting*. July 27, 2021.
- OP.14 Veum KS, **Nunes MR** et al. The Soil Health Assessment Protocol and Evaluation (SHAPE). In: *ASA, CSSA and SSSA International Annual Meetings, 2020, USA*.
- OP.13 Veum KS, **Nunes MR** et al. The Soil Health Assessment Protocol and Evaluation (SHAPE). *Transactions of the American Geophysical Union Fall Meeting, December 1-17, 2020, virtual*.
- OP.12 **Nunes MR.** The Soil Management Assessment Framework (SMAF) for soil health assessment. NutriNet Research Group Meeting. In: *ASA, CSSA and SSSA International Annual Meetings, 2019, San Antonio, TX, USA*.
- OP.11 Denardin JE, Faganello A, **Nunes MR,** Lemainski J. No-till system is creating stratified soil layers. In: *XXXVII Brazilian Meeting of Soil Science, 2019, Cuiabá, MT, Brazil*.
- OP.10 **Nunes MR** et al., Soil health and maize yield analysis detect long-term tillage and cropping effects. In: *73rd SWCS International Annual Conference Culture, Climate, And Conservation, 2018, Albuquerque, NM, USA*.
- OP.9 van ES HM..., **Nunes MR.** Development of soil health metrics for improving soil productivity and food security challenges. In: *ASA, CSSA, and SSSA International Annual Meetings, 2017, Tampa, FL, USA*.
- OP.8 **Nunes MR,** van ES HM, Ristow A, Schindelbeck R. Measurement and management for improved soil health under cropping systems. In: *Northeast Cover Crop Council Annual Meeting, 2017, Ithaca, NY, USA*. Northeast Cover Crop Council Annual Meeting, 2017.
- OP.7 Silva TS, **Nunes MR** et al., Soil chiseling effects on compactness degree of a Nitisol under no-till. In: *XXIX Scientific Initiation Congress – Federal University of Pelotas, 2013, Pelotas, RS, Brazil*.
- OP.6 Pinto LFS, **Nunes MR** et al. Sulfate released from coal overburden treated with lime in a long-term leaching experiment. In: *4Th International Congress of the European Confederation of Soil Science Societies (ECSSS), 2012, Bari, Italia. EUROSOIL 2012*.
- OP.5 **Nunes MR** et. Acidification and sulfate release as a function of doses of lime in soil contaminated with pyrite in a coal mining area. In: *III Brazilian Meeting of Coal, 2011, Gramado, RS, Brazil*.
- OP.4 **Nunes MR** et al. Chemical characterization of water from a coal mining area under the addition of lime. In: *XIX Scientific Initiation Congress of the Federal University of Pelotas, 2010, Pelotas, RS, Brazil*.

OP.3 Miola ECC... **Nunes MR**. Effect of cover crop on pre-compression pressure of a rebuilt soil. In: *XIX Scientific Initiation Congress of the Federal University of Pelotas*, 2010, Pelotas, RS, Brazil.

OP.2 Silva TR... **Nunes MR**, Panziera W, Furtado LG. Aggregate stability of rebuilt soil after coal mining in Southern Brazil. In: *XVII Scientific Initiation Congress of the Federal University of Pelotas*, 2008, Brazil.

OP.1 **Nunes MR**. Demonstration of crop seeds and seedlings. In: *I CEFET show tech*, 2005, RS, Brazil.

POSTERS

(Total: 46)

Grouped by presentation language. Before 2017, most were written and presented in Portuguese.

English (6)

PP.46 Veum KS, **Nunes MR** et al. The Soil Health Assessment Protocol and Evaluation (SHAPE). In: *ASA, CSSA and SSSA International Annual Meetings*, 2020, USA.

PP.45 Veum KS, **Nunes MR** et al. The Integrated Soil Health Index (ISHI). In: *AGU Fall Meeting*, 2020, USA.

PP.44 **Nunes MR** et al. How does tillage intensity affect soil health in the USA? In: *ASA, CSSA and SSSA International Annual Meetings*, 2019, San Antonio, TX, USA.

PP.43 **Nunes MR** et al. Dynamic changes in compressive properties and crop response after tillage of an Oxisol. In: *2019 SSSA International Soils Meeting*, 2019. San Diego, CA, USA.

PP.42 **Nunes MR** et al. Measurement and management for improved soil health under cropping systems. In: *Northeast Cover Crop Council Annual Meeting*, 2017, Ithaca, NY, USA.

PP.41 **Nunes MR** et al. Physic-chemical and structural properties of an Oxisol under straw and limestone addition. In: *ASA, CSSA and SSSA International Annual Meetings*, 2017, Tampa, FL, USA.

Spanish (1)

At the Argentinian Meeting of Soil Science

PP.40 Stumpf L... **Nunes MR** et al. Efeito de plantas de cobertura na agregação de um solo construído em área de mineração de carvão no sul do Brasil. In: *XXII Congreso Argentino de la Ciencia del Suelo*, 2010, Rosario, Argentina. AACS Asociacion Argentina Ciencia del Suelo.

Portuguese (39)

At the Climate Change and Semiarid Desertification Symposium

PP.39 Batista AM, **Nunes MR** et al. Dispersão de argila na rizosfera de diferentes plantas em dois ciclos de cultivo. In: *VI Simpósio de Mudanças Climáticas e Desertificação no Semiárido*, 2021, Virtual.

At the Brazilian Soil Science Meeting

PP.38 **Nunes MR** et al. Efeito de semeadora equipada com haste sulcadora de ação profunda na mitigação da compactação do solo em plantio direto. In: *XXXIV Congresso Brasileiro de Ciência do Solo*, 2013, Florianópolis, SC, Brazil.

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OTHER WORK/PUBLICATION

Magazine article

(Total: 1)

M.1 **Nunes MR**, 2019. A Sample of Brazilian Culture. In: Medley - A Potpourri of Diverse Talent (Adkins et al.). USDA-ARS-Midwest Area Diversity and Equal Opportunity Council (DEOC), Ames, IA, 2019 (Pag. 7-11). <https://www.ars.usda.gov/ARSUserFiles/50000000/Medley/Medley%20Mar%202019.pdf>

Project reports

(Total: 10)

PR.10 **Nunes MR**, 2020. Annual Progress Report (2019 - 2020). Post-Doctoral project (USDA-NRCS / ARS).

PR.9 **Nunes MR**, 2019. Annual Progress Report (2018 - 2019). Post-Doctoral project (USDA-NRCS / ARS).

PR.8 **Nunes MR**, 2018. Final Report: Ph.D. Scholarship Abroad (Cornell University; 2017 - 2018). FAPESP.

PR.7 **Nunes MR**, 2018. Final Report: Ph.D. Scholarship (2014 - 2018). FAPESP.

PR.6 **Nunes MR**, 2017. Annual Report: Ph.D. Scholarship (2016 - 2017). FAPESP.

PR.5 **Nunes MR**, 2016. Annual Report: Ph.D. Scholarship (2015 - 2016). FAPESP.

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PR.2 **Nunes MR**, 2009. Annual Report: Scientific Initiation Scholarship (2009 – 2010). CNPq.
PR.1 **Nunes MR**, 2008. Annual Report: Scientific Initiation Scholarship (2007 – 2008). CNPq.

SERVICES

Journal Reviewer

2018 – Present

Reviewed manuscripts for the following journals:

- Agriculture, Ecosystems & Environment
- Brazilian Journal of Soil Science
- Soil & Tillage Research
- Agronomy Journal
- Microorganisms
- Sustainability
- Soil Research

Book Chapter Reviewer

2020

Ippolito AJ (2021). Nutrient Availability: Macro- and Micro-nutrients and Soil Quality/Health. In: *Laboratory Methods for Soil Health Analysis* (eds Karlen DK, Stott D, & Mikha MM). Madison, WI, USA, John Wiley & Sons, Inc.

Stott DE et al. (2021). Soil health assessment for agricultural lands. In: *Laboratory Methods for Soil Health Analysis* (eds Karlen DK, Stott D, & Mikha MM). Madison, WI, USA, John Wiley & Sons, Inc.

Karlen DL (2021). An Ode to Soil Health. In: *Laboratory Methods for Soil Health Analysis* (eds Karlen DK, Stott D, & Mikha MM). Madison, WI, USA, John Wiley & Sons, Inc.

Scientific Meeting (Committee Member)

2008

Nunes MR et al. 2008. 1st Soil Science Symposium, Federal University of Pelotas. Pelotas, Brazil.

EXTENSION and OUTREACH

Embrapa Wheat, Passo Fundo, RS, Brazil

2013 – 2018

As a team member of the project “*Improvement, innovation, and development of knowledge and technologies for the no-till system*”, conducted by EMBRAPA at a national scale, I participated in several extension events including mini-courses, workshops, and field-days as a tutor, speaker, expositor, or listener.

PROFESSIONAL MEMBERSHIPS

Soil Science Society of America
American Society of Agronomy
Brazilian Soil Science Society

2017 – Present

2020 – Present

2012 – 2014