João Arthur Antonangelo

Department of Crop and Soil Sciences
Washington State University, Pullman, WA 99164
Phone: +1 (509) 335-4877; E-mail: joao.antonangelo@wsu.edu

Education

1. Doctor of Philosophy in Soil Sciences **Aug 2016 – June 2019**
Oklahoma State University (OSU) *Stillwater, OK, USA*
Dissertation: "Nutrient dynamics in a highly weathered soil under no-till and heavy metal phytoavailability as affected by biochar amendment". GPA: 4.0

2. Doctor of Philosophy in Soil Sciences **Jul 2015 – Jul 2016**
University of Sao Paulo (ESALQ/USP) *Piracicaba, SP, Brazil*
Transferred to Oklahoma State University GPA: 4.0

3. Visiting Scientist in Chemistry **June 2014 – Nov 2014**
Lakehead University (LU) *Thunder Bay, Ontario, Canada*
Project: "Chemical speciation of aluminum (liquid-state) in soil solution by nuclear magnetic resonance spectroscopy (^{27}Al-NMR), BE.EP.MS".

4. Master of Science in Soils and Plant Nutrition **Feb 2013 – Jun 2015**
University of Sao Paulo (ESALQ/USP) *Piracicaba, SP, Brazil*
Thesis: "Forms of silicon and aluminum in an Oxisol under no-till amended with lime and calcium-magnesium silicate". GPA: 4.0

5. International Exchange Student in Plant and Soil Sciences **June 2012 – Nov 2012**
Oklahoma State University (OSU) *Stillwater, OK, USA*
Project: "The effect of air-drying and drying temperatures on the results of soil analysis".

6. Bachelor of Science in Agricultural Engineering **Mar 2008 - Dec 2012**
Sao Paulo State University (UNESP/FCA) *Botucatu, SP, Brazil*
Thesis: "Chemical changes in soil and plant tissue after application of urban and industrial wastes in an Oxisol under no-till". GPA: 8.4/10
Honors: highest average in the 2010 Horticulture Class.

Professional Experience

1. *Washington State University, Pullman, WA, USA*
Assistant Professor of Applied Soil Chemistry **August 2023 – Current**
Supervisor: Dr. Lynne Carpenter-Boggs
Develop research in applied soil chemistry with an emphasis on organic matter dynamics and biogeochemistry. Topics of study include soil carbon sequestration, organic matter turnover, nutrient release from organic matter and crop residues, root exudates, organo-mineral interactions, and soil acidification.

2. *Austin Peay State University, Clarksville, TN, USA*
Assistant Professor of Agriculture (Soil Science) **August 2022 – July 2023**
Supervisor: Dr. Donald Sudbrink
Teaches undergraduate courses in Soils, Soil Conservation, Fertilizers, Soil Taxonomy, and related fields. Serves as an academic advisor for students (including those in Professional Science Master's

program), contributes to appropriate committee work/service activities, and is involved in scholarly activities/research.

3. ***Oklahoma State University, Stillwater, OK, USA***
Postdoctoral Research Associate **July 2019 – July 2022**
Supervisor: Dr. Hailin Zhang
Responsible for designing and conducting research projects including using biochar as a soil amendment, metal detection using XRF, and soil health assessment and improvement using cover crops. New research projects to address soil health assessment, laboratory procedures, and other soil chemistry/environmental quality-related topics have been initiated. The researcher is developing manuscripts of completed and ongoing research findings and submitting them for publication, writing grant proposals for external and internal funding, and coordinating research activities in the research team.

4. ***Oklahoma State University, Stillwater, OK, USA***
Ph.D. Graduate Research Associate **Aug 2016 – June 2019**
Advisor: Dr. Hailin Zhang
Research projects examined P and K fertilization for soybeans in acidic soil under NT, utilizing synchrotron light and X-ray fluorescence techniques for P speciation. Synchrotron-based methods offered unparalleled insights compared to traditional wet chemistry. These studies enhanced my understanding of P and K dynamics and optimizing resource management. Another project focused on biochar's efficacy in reducing heavy metal phytoavailability in polluted soil. Biochars from poultry litter (PLB) and switchgrass (SGB) at 350 and 700 °C were characterized, followed by assessing their impact on Pb, Cd, and Zn immobilization in Tar Creek contaminated soils. Additionally, I served as a TA for Soil Chemistry, aided students in VisualMINTEQ software usage, and delivered lectures. I contributed to peer-reviewed publications, research presentations, and extension reports at OSU.

5. ***University of Sao Paulo (ESALQ/USP), Piracicaba, SP, Brazil***
Ph.D. Graduate Research Associate **Jul 2015 – Jul 2016**
Advisor: Dr. Luís R. F. Alleoni
The research was aimed at evaluating bioavailable P and K extraction methods. I focused on the effects of continuous annual fertilization (two crops) on soil P and K availability by Mehlich-1 and ion exchange resin, plant uptake, P/K responsive concentrations in the soil and soybean trifoliate leaflets, and the yields of two soybean cultivars grown in a Brazilian Oxisol under 20 yr of NT management. I guest lectured for Soil Genesis and Morphology, Soil Geochemistry, Soil Organic Matter, Fertilizers and Fertilization, and Nutrition and Fertilization of Forage Plants classes. I had 6 months of pedagogical training, advised an Extension Term paper, and published in refereed journals.

6. ***Lakehead University (LU), Thunder Bay, Ontario, Canada***
Visiting Scientist (M.S.) **June 2014 – Nov 2014**
Host: Dr. Stephen D. Kinrade
I performed research in the Chemistry Department conducting experiments on aluminum speciation (and quantification) by nuclear magnetic resonance spectroscopy (^{27}Al-NMR, liquid state) for tropical soils. I participated in local research events and developed a research report.

7. ***University of Sao Paulo (ESALQ/USP), Piracicaba, SP, Brazil***
M.S. Graduate Research Assistant **Feb 2013 – Jun 2015**
Advisor: Dr. Luís R. F. Alleoni
I performed research on soil chemical speciation focusing on silicon and aluminum species of an experimental area under long-term NT cultivated with rice and that received the surface application

of lime and silicate. I successfully studied silicon nutrition for sugarcane and published it in high-impact factor journals. I also coordinated a 2-yr extension course in Soils and Plant Nutrition and served seven students to complete their course project summaries. I also advised several undergraduate students on soil testing and research analyses.

8. ***Oklahoma State University, Stillwater, OK, USA***
Intern in Research and Extension **June 2012 – Nov 2012**
Advisor: Dr. Hailin Zhang
I conducted research at the Soil, Water and Forage Analytical Laboratory (SWFAL) on the effect of air-drying and drying temperatures on the results of soil analysis and helped in soil laboratory with sample preparation and analyses for extension purposes. I learned the basics of agricultural testing such as drying and grounding soil and plant samples, extracting macro and micronutrients, and operating the state-of-art analytical instruments; helped graduate students to collect plant and soil samples and attended international conferences.

9. ***Sao Paulo State University (UNESP/FCA), Botucatu, Sao Paulo, Brazil***
Intern in Scientific Initiation (IC) **Mar 2009 - May 2012**
Advisor: Dr. Leonardo T. Büll
It was my first experience with a long-term field study under no-till (NT). I evaluated the effects of residue application on black oat and soybean yields under rotation. I investigated plant and soil chemical changes in an experimental area cultivated with sorghum and soybean. The phosphorus availability for soybean under NT with urban and industrial waste/residue application was also explored. I performed soil phosphorus fractionation aiming to obtain its organic and inorganic forms and learned phosphorus biogeochemistry in tropical soils.

Research Financial Support

The bolded numbers in parentheses are the contributions: 1, Provided the initial idea; 2, Developed research design and hypotheses; 3, Authorship of the grant application; 4, Developed and/or managed budget; 5, Managed personnel and project activities; and the amount of funds for which I had responsibility.

Funded ($703,073.88 to my program; $473,673.88 competitive)

1. **Antonangelo, J. A.** (**Principal**), Wieme, R. (Co-Principal), Koenig, R.T. (Collaborator) "Optimizing Soil Base Saturation for Enhanced Canola Production", Sponsored by Washington Oilseed Cropping Systems (WOCS), Internal (**2026–2028**). **(1,2,3,4,5, $22,250)** $29,000
2. **Antonangelo, J. A.** (**Principal**), Singh, S. (Co-Principal), LaHue, D. G. (Co-Principal), Mridha, D. (Collaborator). "Rapid Soil Quality and Health Assessment Using Portable X-Ray Fluorescence (pXRF): Linking Biosolids, Soil, and Plant Systems in Washington Agriculture", Sponsored by Emerging Research Issues (ERI), Internal (**2026–2028**). **(1,2,3, 5, $61,520)** $100,000
3. Singh, S., LaHue, D. G., Singh, S., **Antonangelo, J. A. (Collaborator)**, Neely, H. "Boosting Research Capacity 1: Equipment [Elementar Vario Max Carbon & Nitrogen analyzer (Solid Mode)]", Sponsored by WSU Equipment Grant for Boosting Research Capacity (Short-term Hatch funds), Internal (**2026**) **(3)** $100,000
4. **Antonangelo, J.A.** (**Principal**), Carpenter-Boggs, L., Mridha. D., Sadia, M. M., Islam, M. Industry-Sponsored Support: Ascendant Demolition L.L.C. Support for heavy metal analysis in leachates from concrete-treated soils (**2026**). **(2,4,5, $2,400)** $2,400
5. **Antonangelo, J.A.** (**Principal**), Carpenter-Boggs, L., Mridha. D., Sadia, M. M., Islam, M. Industry-Sponsored Support: Ascendant Demolition L.L.C. Support for PFAS analysis in recycled concrete materials (**2025**). **(2,4,5, $2,000)** $2,000
6. **Antonangelo, J. A.** (**Principal**) Washington Wheat Distinguished Professorship, Washington Grain Commission (WGC), State (**2023–2026**). **(2,3,4,5, $225,000)** ***non-competitive*** $225,000

7. **Antonangelo, J. A.** (**Principal**) Equipment Request (portable XRF), Washington Grain Commission (WGC), State (**2024–2025**). **(1,3,4, $50,000)** $50,000
8. **Antonangelo, J. A.** (**Principal**), Koenig, R. T. (Co-Principal), "Balancing Soil Base Saturation for Optimal Wheat Yield: A pH-Driven Approach", Sponsored by Washington Grain Commission (WGC), State (**2024–2026**). **(1,2,3,4,5, $109,591)** $109,591
9. **Antonangelo, J. A.** (**Principal**), Koenig, R. T. (Co-Principal), "Optimizing Canola Production through Depth-Specific Lime Application and Soil Stratification Analysis", Sponsored by Washington Oilseed Commission (WOC), State (**2024–2026**). **(1,2,3,4,5, $98,840.88)** $98,840.88
10. Bull, L. T. (Principal), da Silva, L. (Co-Principal), **Antonangelo, J. A. (Collaborator)**, Castro, G. (Co-Principal), "Phosphate × silicate interaction: adsorption kinetics in Oxisols and agronomic efficiency of phosphate fertilizers", Sponsored by Sao Paulo Research Foundation (FAPESP), State (**Mar 2024–Feb 2026**). **(3)** $30,800
11. Singh, S. (Principal), **Antonangelo, J. A. (Co-Principal)**, "Can Humic and Fulvic Acids Enhance Micronutrient Availability in Canola Production?", Sponsored by Washington Oilseed Commission (WOC), State (**2024–2025**). **(1,2,3,4, $4,725)** $9,450
12. **Antonangelo, J. A.** (**Principal**), Koenig, R. T. (Co-Principal), "Optimizing Soil Base Saturation for Enhanced Canola Production", Sponsored by Washington Oilseed Cropping Systems (WOCS), Internal (**2024–2026**). **(1,3,4,5, $78,000)** $78,000
13. Singh, S. (Principal), Singh, S. (Co-Principal), **Antonangelo, J. A. (Co-Principal)**, "Are soil micronutrients limiting the dryland canola production? A Survey", Sponsored by Washington Oilseed Cropping Systems (WOCS), Internal (**2024–2026**). **(2,3, $13,808)** $41,423
14. Lyon, D. (Principal), **Antonangelo, J. A.** (**Co-Principal**), et al., "Extension Education for Wheat and Barley Growers", Sponsored by Washington Grain Commission (WGC), State (**2024–2026**). **(3,5)** $89,262
15. **Austin Peay State University (APSU)** **2022–2023**
    Richardson, P. (Co-Principal), Tillewein, H. (Principal), **Antonangelo, J. A. (Supporting)**, "The Environmental Health Impact of Cemetery Waste", Sponsored by Austin Peay State University, Austin Peay State University. (2023). **(2,3,4,5)** $1,952.75
16. **Oklahoma Department of Agriculture, Food and Forestry (ODAFF)** **May 2020–Apr 2022**
    Oklahoma State University (OSU), Stillwater, OK, US
    - Co-Pi: Received funding to conduct the project: “Improvement of vegetable production and soil health using cover crops”. **(2,3,5)** $51,559.93
17. **Coordination for the Improvement of Higher Level -or Education- Personnel (CAPES)** **Jul 2015–Jul 2016**
    University of Sao Paulo (ESALQ/USP), Piracicaba, SP, Brazil
    - Received funding to conduct the project: “Phosphorus speciation by P-XANES as affected by continuous fertilization in an Oxisol under long-term no-till, Ph.D.”. **(1,2,3,5, $6,727)** $6,727
18. **Sao Paulo Research Foundation (FAPESP-SP)** **Jul 2014–Dec 2014**
    Lakehead University (LU), Thunder Bay, ON, Canada
    - Project: “Chemical speciation of aluminum in soil solution by nuclear magnetic resonance spectroscopy (^{27}Al-NMR), BE.EP.MS”. **(1,2,3,4,5, $7,720)** $7,720
19. **Sao Paulo Research Foundation (FAPESP-SP)** **Dec 2013–Aug 2015**
    University of Sao Paulo (ESALQ/USP), Piracicaba, SP, Brazil
    - Project: “Forms of silicon in an Oxisol under no-till as a function of surface application of calcium-magnesium silicate in a long-term experiment, BP.MS”. **(1,2,3,4,5, $14,590)** $14,590
20. **Sao Paulo Research Foundation (FAPESP-SP)** **Nov 2011–Oct 2012**
    Sao Paulo State University (UNESP/FCA), Botucatu, SP, Brazil
    - Project: “Phosphorus availability for soybean cultivated in soil treated with urban and industrial wastes under no-till, BP.IC”. **(2,3,5, $2,340)** $2,340

21. **Sao Paulo Research Foundation (FAPESP-SP)** **Aug 2010–Jul 2011**
    Sao Paulo State University (UNESP/FCA), Botucatu, SP, Brazil
    - Project: "Chemical changes in soil and plants tissue after application of urban and industrial wastes in an Oxisol under no-till, BP.IC". **(2,3,5, $2,340)** $2,340
22. **National Counsel of Technological and Scientific Development (CNPq)** **Jul 2009–Jul 2010**
    Sao Paulo State University (UNESP/FCA), Botucatu, SP, Brazil
    - Project: "Crop rotation under no-till system on dry winter region as a function of urban and industrial wastes application, IC". **(2,3,5, $1,222)** $1,222

Not Funded ($495,226.5 to my program, competitive)

1. **Antonangelo, J. A.** (**Principal**), Phillips, C. "Evaluating Nitrogen EEF Efficacy and Environmental Impact in the Western United States", Sponsored by Foundation for Food & Agriculture Research (FFAR), Federal (**2025–2030**). **(2,3,4,5, $132,386.50)** $995,779 (*Allocated to WSU*: $264,773)
2. **Antonangelo, J. A.** (**Principal**), Islam, M. R. (Co-Principal), "Mitigating Nutrient and Metal Contamination in Washington State's Water Resources Using Biochar-Based Remediation", Water Resources Center, State of Washington, Local (**2025–2026**). **(1,2,3,4,5, $30,000)** $30,000
3. Singh, S. (Principal), Singh, S. (Co-Principal), **Antonangelo, J. A.** (**Co-Principal**), "Modernizing Nutrient Management Recommendations for Climate-Smart Crop Production in the West: The Fertilizer Recommendation Support Tool (FRST)", Sponsored by Natural Resources Conservation Service (NRCS)–Conservation Innovation Grants (CIG), Federal (**2024–2029**). **(2,3,4,5, $216,296)** $4,947,760 (*Allocated to WSU*: $648,887)
4. **Antonangelo, J. A.** (**Principal**), Singh, S. (Co-Principal), Singh, S. (Co-Principal), "On-farm Demonstration and Evaluation of Different Soil Sensing-based Precision Nutrient Management Strategies to Improve Profitability and Sustainability", Sponsored by Natural Resources Conservation Service (NRCS)– Conservation Innovation Grants (CIG), Federal (**2024–2029**). **(2,3,4,5, $116,544)** $2,701,698 (*Allocated to WSU*: $349,631)
5. Eufrade Junior, H. (Principal), **Antonangelo, J. A. (Supporting)**, et al. "Qualidade da Madeira e da Casca de especies de Corymbia spp. para processos industriais", Sponsored by National Council for Scientific and Technological Development (CNPq), Federal (**2024–2026**). **(3)** $32,653
6. Zhang, H. (Principal), and **Antonangelo, J. A. (Co-Principal)**. " Using poultry litter biochar loaded with nutrients from wastewater as a soil amendment", Sponsored by Oklahoma Water Resources Center, State (**2021–2022**). **(1,2,3)** $25,000
7. Grace, M. (Principal), …, and **Antonangelo, J.A. (Collaborator)**, "Accelerating Food Systems Transformation: Coordinating diverse data types and nutritional signatures to support Climate-Smart Agriculture, Expansive Nutrition Security, and Healthy and Resilient Communities", Sponsored by USDA-FFAR Innovation Challenge: "Nourishing Next Generation Agrifood Breakthroughs", Federal (**2025–2027**). **(3)** $495,802.62
8. Pumphrey, M. (Principal), …, and **Antonangelo, J.A. (Collaborator)**, "Enhancing the nutritional resilience of wheat in degraded soils", Sponsored by USDA National Institute of Food and Agriculture, Federal (**2024–2027**). **(2,3)** $648,887
9. Pumphrey M. (Principal), …, and **Antonangelo J.A. (Co-Principal)**, "Enhancing the nutritional resilience of wheat in degraded soils", Sponsored by USDA National Institute of Food and Agriculture, Federal (**2025–2028**). **(1,3,5, $*TBD*)** $649,658

Under Review ($274,850 to my program, competitive)

1. **Antonangelo, J. A.** (**Principal**), Khadka, K. (Co-Principal), "Phosphorus and Gypsum as Lime Alternatives for Mitigating Aluminum Toxicity and Improving Canola Productivity in

Washington Acid Soils", Sponsored by Washington Oilseed Commission (WOC), State (**2026–2028**). **(1,2,3,4,5, $134,550)** $134,550

2. **Antonangelo, J. A. (Principal)**, Koenig, R. T. (Co-Principal), "Exploring phosphorus and gypsum as lime alternatives for reducing aluminum toxicity and enhancing crop productivity in dryland wheat systems", Sponsored by Washington Grain Commission (WGC), State **(2026–2028). (1,2,3,4,5, $127,800)** $127,800
3. **Antonangelo, J. A.** (**Principal**), Koenig, R. T. (Co-Principal), "Optimizing Canola Production through Depth-Specific Lime Application and Soil Stratification Analysis", Sponsored by Washington Oilseed Commission (WOC), State (**2026–2027**). **(1,2,3,4,5, $12,500)** $12,500

Publications

(https://scholar.google.com/citations?user=v2ft3oQAAAAJ&hl=en&oi=ao)

The bold numbers in parentheses are the contributions: 1, Developed the initial idea; 2, Obtained or provided funds or other resources; 3, Collected data; 4, Analyzed data; 5, Wrote/created product; and 6, Edited product. **Δ: *Published at WSU***

Peer-reviewed Papers (49 published)

1. Δ da Silva, L.J.R, da Silva, A.P.R., Lima, T.C.A.A., **Antonangelo, J.A.,** Fernandes, D.M., and Bull, L.T. 2025. Soil Phosphorus Fractions: Effects of Silicate Amendments and Phosphorus Sources in Brazilian Tropical Soils. Journal of Sustainable Agriculture and Environment 4(4): 1–16. **(2,5,6)**
2. Δ Mridha, D., Lamsal, B., and **Antonangelo, J.A.** 2025. Nanotechnology in agriculture: Innovations for sustainability and greenhouse gas mitigation-A review. Science of the Total Environment. **(2,5,6)**
3. Δ **Antonangelo, J.A.**, and Eufrade Junior, H. 2024. Biochar Impact on Soil Health and Tree Crops: A Review. Biochar. **(1,3,4,5,6)**
4. Δ **Antonangelo, J.A.**, Souza, J.L.B., and Zhang, H. 2025. Fertilizer Potential of Biochar and Ryegrass Productivity in Metal-Contaminated Soil. Frontiers in Plant Science. **(1,3,4,5,6)**
5. Δ Firmano, R.F., Damian, J.M., Soares, T.M., Colzato, M., **Antonangelo, J.A.**, de Campos, M., Soares, M.R., and Alleoni, L.R.F. 2025. Chemical drivers of molybdate-unreactive phosphorus in subtropical forest soils: insights from P tests, chemical properties and XANES. Journal of Soil Science and Plant Nutrition. **(4,5,6)**
6. Δ **Antonangelo, J.**, and H. Zhang. 2024. Assessment of portable X-ray fluorescence (pXRF) for plant-available nutrient prediction in biochar-amended soils. Scientific Reports 14(1). **(1,3,4,5,6)**
7. Δ **Antonangelo, J.A.**, S. Culman, and H. Zhang. 2024. Comparative analysis and prediction of cation exchange capacity via summation: Influence of biochar type and nutrient ratios. Frontiers in Soil Science 4. **(1,3,4,5,6)**
8. Δ da Silva, L.J.R, Sandim, A.S., da Silva, A.P.R., Deus, A.C.F., **Antonangelo, J.A.**, and Bull, L.T. 2024. Enhancing Maize Crop Yield in Brazilian Tropical Soils: Evaluating the Agronomic Efficiency of Alternative Phosphorus Sources. Scientific Reports 14: 8526. **(2,5,6)**.
9. Δ Richardson, P., Tillewein, H., **Antonangelo, J.**, Frederick, D. 2024. The Impact on Environmental Health from Cemetery Waste in Middle Tennessee. Int. J. Environ. Res. Public Health 21(3): 267. **(2,3,4,5,6)**
10. **Antonangelo, J.A.**, H. Zhang, and I. Sitienei. 2023. Biochar amendment of a metal contaminated soil partially immobilized Zn, Pb, and Ca and reduced ryegrass uptake. Frontiers in Environmental Science 11. **(1,3,4,5,6)**
11. Souza, J.L., **J.A. Antonangelo**, H. Zhang, V. Reed, B. Finch, and B. Arnall. 2023. Impact of long-term fertilization in no-till on the stratification of soil acidity and related parameters. Soil and Tillage Research 228: 105624. **(1,4,5,6)**

12. **Antonangelo, J.A.**, J.L. Souza, A. Whitaker, B. Arnall, and H. Zhang. 2022. Evaluation of mehlich-3 as a multi-element extractant of micronutrients and sulfur in a soil–ryegrass system amended with varying biochar rates from two feedstocks. Land 11(11): 1979. **(1,3,4,5,6)**
13. **Antonangelo, J.A.**, J.F. Neto, C.A. Crusciol, H. Zhang, and L.R. Alleoni. 2022. Lime and calcium-magnesium silicate cause chemical attributes stratification in no-till fields. Soil and Tillage Research 224: 105522. **(1,3,4,5,6)**
14. Souza, J.L., **J.A. Antonangelo**, A. de Oliveira Silva, V. Reed, and B. Arnall. 2022. Recovery of grain yield and protein with fertilizer application post nitrogen stress in winter wheat (Triticum aestivum L.). Agronomy 12(9): 2024. **(4,5,6)**
15. **Antonangelo, J.A.**, J.F. Neto, C.A. Costa Crusciol, H. Zhang, L.R. Alleoni, and S.D. Kinrade. 2022. Comparative analysis of exchangeable aluminum in a tropical soil under long-term no-till cultivation. Soil and Tillage Research 216: 105242. **(1,3,4,5,6)**
16. **Antonangelo, J.**, and H. Zhang. 2021. Soil and plant nutrient analysis with a portable XRF probe using a single calibration. Agronomy 11(11): 2118. **(1,3,4,5,6)**
17. Zhang, H., J. **Antonangelo, J**. Grove, D. Osmond, N.A. Slaton, S. Alford, R. Florence, G. Huluka, D.H. Hardy, J. Lessl, R. Maguire, R. Mylavarapu, J.L. Oldham, E.M. Pena-Yewtukhiw, T. Provin, L. Sonon, D. Sotomayor, and J. Wang. 2021. Variation in soil-test-based phosphorus and potassium rate recommendations across the Southern USA. Soil Science Society of America Journal 85(4): 975–988. **(3,4,5,6)**
18. Horn, K.M., A.C. Rocateli, J.G. Warren, K.E. Turner, and **J.A. Antonangelo**. 2021. Evaluating cover crops forage nutritive value in Oklahoma Winter Wheat Systems. Agronomy Journal 113(4): 3361–3371. **(4,5,6)**
19. Gillespie, C.J., **J.A. Antonangelo**, and H. Zhang. 2021. The response of soil pH and exchangeable Al to alum and lime amendments. Agriculture 11(6): 547. **(4,5,6)**
20. Zhang, H., **J. Antonangelo**, and C. Penn. 2021. Development of a rapid field testing method for metals in horizontal directional drilling residuals with XRF sensor. Scientific Reports 11(1). **(3,4,5,6)**
21. **Antonangelo, J.**, and H. Zhang. 2021. Influence of biochar derived nitrogen on cadmium removal by ryegrass in a contaminated soil. Environments 8(2): 11. **(1,3,4,5,6)**
22. **Antonangelo, J.A.**, X. Sun, and H. Zhang. 2021. The roles of co-composted biochar (Combi) in improving soil quality, crop productivity, and Toxic Metal amelioration. Journal of Environmental Management 277: 111443. **(1,2,3,4,5,6)**
23. Daniel, J., C. Penn, **J. Antonangelo**, and H. Zhang. 2020. Land application of urban horizontal directional drilling residuals to established grass and bare soils. Sustainability 12(24): 10264. **(4,5,6)**
24. **Antonangelo, J.A.**, R.F. Firmano, H. Zhang, M. Colzato, D.B. Abdala, H.W.P. Carvalho, A. de Oliveira Junior, and L.R.F. Alleoni. 2020. Phosphorus speciation by P-XANES in an Oxisol under long-term no-till cultivation. Geoderma 377: 114580. **(1,2,3,4,5,6)**
25. Daniel, J., C. Penn, **J. Antonangelo**, and H. Zhang. 2020. Physicochemical characterization of horizontal directional drilling residuals. Sustainability 12(18): 7707. **(4,5,6)**
26. Horn, K.M., A.C. Rocateli, J.G. Warren, K.E. Turner, and **J.A. Antonangelo**. 2020. Introducing grazeable cover crops to the winter wheat systems in Oklahoma. Agronomy Journal 112(5): 3677–3694. **(4,5,6)**
27. Massey, J., **J. Antonangelo**, and H. Zhang. 2020. Nutrient dynamics in switchgrass as a function of Time. Agronomy 10(7): 940. **(4,5,6)**
28. Massey, J., **J. Antonangelo**, and H. Zhang. 2020. Nitrogen fertilization and harvest timing affect switchgrass quality. Resources 9(6): 61. **(4,5,6)**
29. Abreu, L.F., A.C. Rocateli, M. Manuchehri, D.B. Arnall, C.L. Goad, and **J.A. Antonangelo**. 2020. Assessing forage bermudagrass cultivar tolerance to glyphosate application. Crop, Forage & Turfgrass Management 6(1). **(4,5,6)**

30. Massey, J.R., **J.A. Antonangelo**, and H. Zhang. 2020. Nitrogen affecting switchgrass yield, nitrogen removal, and use efficiency. Agrosystems, Geosciences & Environment 3(1). **(4,5,6)**

31. Antonangelo, J.A., and H. Zhang. 2019. Heavy Metal phytoavailability in a contaminated soil of northeastern Oklahoma as affected by Biochar Amendment. Environmental Science and Pollution Research 26(32): 33582–33593. **(1,3,4,5,6)**

32. Antonangelo, J.A., H. Zhang, X. Sun, and A. Kumar. 2019. Physicochemical properties and morphology of biochars as affected by feedstock sources and pyrolysis temperatures. Biochar 1(3): 325–336. **(1,3,4,5,6)**

33. Antonangelo, J.A., R.F. Firmano, L.R. Alleoni, A. Oliveira, and H. Zhang. 2019. Soybean production under continuous potassium fertilization in a long-term no-till Oxisol. Agronomy Journal 111(5): 2462–2471. **(1,3,4,5,6)**

34. Cardoso dos Santos, S.M., **J.A. Antonangelo**, A.C. Deus, and L.T. Büll. 2019. Inorganic phosphorus forms in an Oxisol under no-till after industrial and municipal residues application. Revista de Agricultura Neotropical 6(3): 12–19. **(3,4,5,6)**

35. Antonangelo, J.A., R.F. Firmano, L.R. Alleoni, A. Oliveira, and H. Zhang. 2019. Soybean yield response to phosphorus fertilization in an Oxisol under long-term no-till management. Soil Science Society of America Journal 83(1): 173–180. **(1,3,4,5,6)**

36. Crusciol, C.A., D.P. de Arruda, A.M. Fernandes, **J.A. Antonangelo**, L.R. Alleoni, D.M. Fernandes, and J.M. McCray. 2018. Evaluation of soil extractants for silicon availability for sugarcane. Journal of Plant Nutrition 41(17): 2241–2255. **(4,5,6)**

37. Cardoso dos Santos, S.M., **J.A. Antonangelo**, A.C. Deus, and L.T. Büll. 2018. Diagnose foliar E produção de soja após aplicação de resíduos em um Latossolo sob sistema plantio direto. Revista de Agricultura Neotropical 5(3): 10–19. **(3,4,5,6)**

38. de Campos, M., **J.A. Antonangelo**, S.E.A.T.M. van der Zee, and L.R. Alleoni. 2018. Degree of phosphate saturation in highly weathered tropical soils. Agricultural Water Management 206: 135–146. **(4,5,6)**

39. Crusciol, C.A., D.P. de Arruda, A.M. Fernandes, **J.A. Antonangelo**, L.R. Alleoni, C.A. Nascimento, O.B. Rossato, and J.M. McCray. 2018. Methods and extractants to evaluate silicon availability for sugarcane. Scientific Reports 8(1). **(4,5,6)**

40. Antonangelo, J.A., J. Ferrari Neto, C.A. Crusciol, and L.R. Alleoni. 2017. Lime and calcium-magnesium silicate in the ionic speciation of an Oxisol. Scientia Agricola 74(4): 317–333. **(1,2,3,4,5,6)**

41. Firmano, R.F., R.R. Barzan, G.A. Fregonezi, **J.A. Antonangelo**, T.R. Melo, and G.D. Delalibera. 2017. Initial development of eucalyptus clone i144 (eucalyptus grandis x *eucalyptus urophylla*) in response to foliar and soil fertilization. Scientia Agraria 18(4): 114. **(4,5,6)**

42. de Campos, M., **J.A. Antonangelo**, and L.R. Alleoni. 2016. Phosphorus Sorption index in humid tropical soils. Soil and Tillage Research 156: 110–118. **(4,5,6)**

43. Cardoso dos Santos, S.M., **J.A. Antonangelo**, A.C. Deus, and D.M. Fernandes. 2016. Perdas de amônia por volatilização em resposta a adubação nitrogenada do feijoeiro. Revista de Agricultura Neotropical 3(1): 16–20. **(4,5,6)**

44. Cardoso dos Santos, S.M., D.M. Fernandes, and **J.A. Antonangelo**. 2016. Fontes e doses de nitrogênio na nutrição, produção e qualidade de grãos do feijoeiro comum. Journal of Agronomic Sciences 5(1): 69–82. **(4,5,6)**

45. de Moura Cardoso dos Santos, S., **J.A. Antonangelo**, A. Cristina Fernandes Deus, and L. Theodoro Büll. 2015. Efeito da aplicação de resíduos urbanos e industriais na cultura da aveia preta cultivada em Latossolo vermelho em sistema plantio direto. Journal of Neotropical Agriculture 02(01): 66–75. **(3,4,5,6)**

46. Miggiolaro, E.A., **J.A. Antonangelo**, L.T. Büll , D.M. Fernandes, and M.A. Silva. 2015. Cu, Fe, Mn, Zn e produtividade da soja após reaplicação superficial de lodo de esgoto, lama cal e escória de aciaria em sistema semeadura direta. Journal of Agronomic Sciences 4(1): 10–18. **(3,4,5,6)**

47. Silva, M.A., L.T. Büll, A.E. Miggiolaro, **J.A. Antonangelo**, and A.S. Muniz. 2014. Fitodisponibilidade de metais utilizando ácidos orgânicos Após Sucessiva aplicação de resíduos no solo. Revista Brasileira de Engenharia Agrícola e Ambiental 18(12): 1287–1295.

48. Miggiolaro, E.A., **J.A. Antonangelo**, D.M. Fernandes, L.T. Büll , and E.E. Freitag. 2014. **(5,6)** Diagnose foliar da cultura da soja em função da aplicação superficial de lodos de esgoto e resíduos industriais sob diferentes doses em sistema plantio direto. Journal of Agronomic Sciences 3(1): 58–73. **(3,4,5,6)**

49. Gonçalves da Silva, M.A., L.T. Bull, A.E. Miggiolaro, **J.A. Antonangelo**, and A.S. Muniz. 2013. Heavy metals extracted by DTPA and organic acids from soil amended with urban or industrial residues. Communications in Soil Science and Plant Analysis 44(22): 3216–3230. **(5,6)**

Forthcoming articles (11)

Accepted (1); Submitted (2)

1. **Antonangelo, J.A.**, Koenig, R. 2026. Interactions between dissolved organic carbon and aluminum activity in tropical and temperate no-till agroecosystems. *Journal of Sustainable Agriculture & Environment*.
2. **Antonangelo, J.A.**, Somsubhra, C., Mridha, D., Singh, S., and Singh, S. 2026. Evaluating pXRF Accuracy for Predicting Soil Fertility: Effects of Moisture and Soil Properties. *Scientific Reports*.
3. da Silva, L.J.R, Silva, A.P., Peres, A., **Antonangelo, J.A.**, Bonetti, J., Fernandes, D., de Castro, G., and Bull, L.T. 2026. Soil chemical properties effect on Phosphorus Fractions and Maximum adsorption capacity in Brazilian tropical soils. *Soil Science Society of America Journal*. (*Accepted*).

In preparation (8)

4. **Antonangelo, J.A.**, Souza, J.L.B., Arnall, B., and Zhang, H. Characterization of phosphorus in soils amended with two sources of biochars. *Journal TBD*.
5. **Antonangelo, J.A.**, Massey, J., Brandenberger, L., Neely, H., and Zhang, H. Impact of Cover Crops on Soil Health and Cowpea and Sweet Potato Production: A 3-year Dryland Study. *Agriculture, Ecosystems & Environment*.
6. Zhang, H., **Antonangelo, J.A**., and Whitaker, A. The effect of air-drying and drying temperatures on soil analytical test values; Part I: Routine (pH, N, P, & K) and Organic Matter. *Methods of Soil Analysis (SSSAJ)*.
7. Zhang, H., **Antonangelo, J.A**., and Whitaker, A. The effect of air-drying and drying temperatures on soil analytical test values; Part II: Secondary- (Ca, Mg, and S) and Micro-nutrients (Cu, Fe, Zn, Mn, and B). *Methods of Soil Analysis (SSSAJ)*.
8. Souza, J.L.B., **Antonangelo, J.A.**, Zhang, H., Reed, V., Finch B., and Arnall, B. Impact of long-term fertilizer management on the soil NPK stratification under no-till. *Journal TBD*.
9. **Antonangelo, J.A.**, da Silva, L.J.R, da Silva, A.P.R., Ferrari Neto, J., Bull, L.T., and Crusciol, C.A.C. Impact of Silicon on Soybean Yields in No-Till Tropical Soils: Insights from pH-Amended Systems. *Journal TBD*.
10. Sun, X., **Antonangelo, J.A.**, Zhang, H., and Hu, B. Endophytes play a significant role in the ability of plants to take up high levels of salts, minerals, and heavy metals from contaminated soils. *Journal TBD*.
11. Abreu, L.F., Manuchehri, M., **Antonangelo, J.A.**, Goad, C., and Rocateli, A. 2025. Assessing Glyphosate Injury and Forage Bermudagrass Re-growth using Canopeo. *Agronomy*.

Book Chapters (6 published, 1 accepted)

1. Mridha, D., Sarkar, J., Labrousse, P., **Antonangelo, J.A.**, Roychowdhury, T. 2026. Magnetic nanomaterials in tissue culture medium and plant growth performance. *In*: Husen, A. (Ed.). *Magnetic Nanomaterials for Plant and Soil Systems Improvement*. Elsevier Inc. **(6)**
2. **Antonangelo, J.A**, Mridha, D., and Firmano, R.F 2025. Transformations and Management of Phosphorus: Bridging Soil Processes with Agricultural Practices. *In*: Aide, Michael et al. (Eds.). *Sustainable Crop Management - Programs, Research and Future Pathways [Working Title]*. IntechOpen. **(1,2 ,5,6)**
3. **Antonangelo, J.A**, Pallikonda, M.K., and Sullivan, T. 2025. Prospects of Biochar for Enhancing Crop Productivity and Ensuring Soil Sustainability. *In*: Kumar, A., Prasad, M.N.V., Kumari, P., and Solanki, M.K. D. (Eds.). *Biochar Ecotechnology for Sustainable Agriculture and Environment*. Elsevier Inc. **(1,2,3,4,5,6)**
4. Pallikonda, M.K., and **Antonangelo, J.A**. 2023. Biochar Application as a filler material to improve the electrical conductivity of polymer composites. *In*: Rangari, V., & Kodali, D. (Eds.). *Biocarbon Polymer Nanocomposites*. Bentham Books. **(5,6)**
5. **Antonangelo, J.A**., and H. Zhang. 2020. The use of biochar as a soil amendment to reduce potentially toxic metals (PTMS) phytoavailability. *In*: Abdelhafez, A.A. and Abbas, M.H.H. (Eds.). *Applications of Biochar for Environmental Safety*. IntechOpen. **(1,2,3,4,5,6)**
6. Zhang, H., F. Vocasek, **J. Antonangelo**, and C. Gillespie. 2020. Temporal changes of manure chemical compositions and environmental awareness in the Southern Great Plains. Animal Manure: 15–26. **(3,4,5,6)**

Textbook (1 in preparation)

1. **Antonangelo, J.A**. 2027. *Soil Acidity: Importance, Implications, and Management*. Elsevier.

Conference paper (1 published)

1. **Antonangelo, J.A.**, H. Zhang, S. Taghvaeian, and S. Carter. 2020. Applying swine effluent for grass production using subsurface drip irrigation. World Environmental and Water Resources Congress 2020. **(1,3,4,5,6)**

Citations and h-index according to multiple sources

Source	Citations	h-index
Google Scholar	1191	17
Scopus	827	15
Web of Science	729	14

As of February 10, 2026

Extension publications (4 published)

1. **Antonangelo J.A**, Casanova, J., Huggins, D., and Koenig, Rich. Unlocking yield potential: THE ROLE OF PHOSPHORUS IN AMELIORATING SOIL ACIDITY IN WASHINGTON GRAIN PRODUCTION. *June 2025 Wheat Life Magazine*. **(1, 4,5,6)** https://wheatlife.org/wp-content/uploads/2025/05/06_WLJune25web.pdf (p. 41-43).
2. **Antonangelo J.A**. A base saturation approach–Optimizing Wheat Production in Acid Soils. *July 2024 Wheat Life Magazine*. **(1,3,4,5,6)** https://wheatlife.org/wp-content/uploads/2024/07/07_WLJuly24web.pdf (p. 50-51).
3. **Antonangelo J.A**, McFarland, C., and Wieme, R. Lime Requirement Estimates for the inland Northwest: A Guide to the updated Calculator. *Extension Fact Sheet*. WSU Extension Publications: https://pubs.extension.wsu.edu/product/lime-requirement-estimates-for-the-inland-northwest-a-guide-to-the-updated-calculator/ (6 p.) **(1,3,4,5,6)**
4. **Antonangelo J.A**, McFarland, C., and Wieme, R. Lime Requirement Estimate Calculator. *Computer Application*. **(1,3,4,5,6)** https://smallgrains.wsu.edu/lime-requirement-calculator/

Outreach, Abstracts, and Presentations at Professional Meetings (61)

1. Chidziwe, L. A. B., Casanova, J., Phillips, C. L., Koenig, R. T., & **Antonangelo, J. A.** (2026) Subsurface Fluid Lime Corrects Soil pH Stratification in No-till Systems. Cropping Systems Conference, Kennewick, WA.
2. Bryan, C. B. Sr., **Antonangelo, J. A.**, Casanova, J., & Koenig, R. T. (2026) Optimizing Canola Production through Depth-Specific Lime Application. Cropping Systems Conference, Kennewick, WA.
3. Lamsal, B., Casanova, J., Koenig, R. T., & **Antonangelo, J. A**. (2026) Optimizing Soil Base Saturation with Lime to Maximize Canola Yield in Acidic Soils of Eastern Washington. Cropping Systems Conference, Kennewick, WA.
4. Mridha, D., **Antonangelo, J. A.**, Casanova, J., & Koenig, R. T. (2026) Soil Base Saturation Optimization Through pH Increment for Wheat Cultivation in Acidic Soils of The Pacific Northwest. Cropping Systems Conference, Kennewick, WA.
5. **Antonangelo, J.A.**, Wieme, R., and Mridha, D. "Soil Acidity, Lime, & Nutrient Management", Pullman, WA, United States. WSU Wheat Academy (December 2025).
6. Lamsal, B., Casanova, J., Koenig, R. T., & **Antonangelo, J. A**. (2025) Base Saturation: Deeper Truth than pH? [Rapid 5-min presentation]. CANVAS 2025, Salt Lake City, UT.
7. Chidziwe, L. A. B., Casanova, J., **Antonangelo, J. A.**, & Phillips, C. L. (2025) Fluid Lime Transport in No-till Systems: Impacts on Nutrient Availability, Grain Yield, and Quality. [Abstract]. CANVAS 2025, Salt Lake City, UT. https://scisoc.confex.com/scisoc/2025am/meetingapp.cgi/Paper/169547
8. Bryan, C. B. Sr., **Antonangelo, J. A.**, Koenig, R. T., & Casanova, J. (2025) Optimizing Canola Production through Depth-Specific Lime Application [Abstract]. CANVAS 2025, Salt Lake City, UT. https://scisoc.confex.com/scisoc/2025am/meetingapp.cgi/Paper/170095
9. Lamsal, B., Mridha, D., Koenig, R. T., Casanova, J., & **Antonangelo, J. A**. (2025) Optimizing Soil Base Saturation through Liming for Canola Production: Field and Greenhouse Insights from Acidic Soils of the Inland Pacific Northwest [Abstract]. CANVAS 2025, Salt Lake City, UT. https://scisoc.confex.com/scisoc/2025am/meetingapp.cgi/Paper/165392
10. Mridha, D., **Antonangelo, J. A.**, Casanova, J., & Koenig, R. T. (2025) Soil Base Saturation Optimization through pH Increment for Wheat Cultivation in Acidic Soils of the Pacific Northwest [Abstract]. CANVAS 2025, Salt Lake City, UT. https://scisoc.confex.com/scisoc/2025am/meetingapp.cgi/Paper/165154
11. Mridha, D., **Antonangelo, J. A.**, Singh, S., & Singh, S. (2025) Evaluating Portable X-Ray Fluorescence (pXRF) for Soil Fertility Assessment: Influence of Moisture and Soil Properties [Abstract]. CANVAS 2025, Salt Lake City, UT. https://scisoc.confex.com/scisoc/2025am/meetingapp.cgi/Paper/165153
12. Lamsal, B., Miranda, A., and **Antonangelo, J.A.** "Optimizing Lime Application Rates to Improve Canola Performance in Acidic Soils". Summer Undergraduate Research Symposium 2025. USDA-NIFA (Research and Extension Experiences for Undergraduates) Ag Data Science Program, Pullman, WA. (August 2025).
13. Lamsal, B., Mridha, D., Bryan, C., Casanova, J., Koenig, R., and **Antonangelo, J.A.** "Evaluation of Lime Requirement for Acidic Soil from Inland Pacific Northwest", WA, ID, and OR, United States. (June 2025). https://s3.wp.wsu.edu/uploads/sites/3122/2025/05/FDA-2025-Complete.pdf
14. Mridha, D., **Antonangelo, J.A.**, Lamsal, B., Bryan, C., Singh, S., and Singh, S. "Predicting Soil Available Nutrients Using Portable XRF (pXRF) Technology in Dryland Soils from the Inland Pacific Northwest", WA, ID, and OR, United States. (June 2025). https://s3.wp.wsu.edu/uploads/sites/3122/2025/05/FDA-2025-Complete.pdf
15. Bryan, C., Mridha, D., Lamsal, B., Casanova, J., Koenig, R., and **Antonangelo, J.A.** "Optimizing Canola Production through Depth Specific Lime Application in the Dryland Palouse Region",

WA, ID, and OR, United States. (June 2025). https://s3.wp.wsu.edu/uploads/sites/3122/2025/05/FDA-2025-Complete.pdf

16. **Antonangelo, J.A.** (June 2026) **"**Determining Base Saturation Thresholds for Optimum Canola Production in Acidic Soils of the Inland Pacific Northwest (iPNW)", Field Day Spring Canola", Pullman, WA
17. Mridha, D. (Author & Presenter), Singh, S. (Author), Singh, S. (Author), Casanova, J. (Author), Koenig, R. T. (Author), Neely, H. L. (Author), Khadka, K. (Author), **Antonangelo, J.** (Author), PMW Canola Workshop 2025, "Optimizing Portable X-ray Fluorescence (pXRF) Calibration for Predicting Plant-Available Nutrients in Canola Soils: Insights from the Pacific Northwest," Pacific Northwest Canola Association, Moscow, ID, United States of America. (January 29, 2025).
18. Lamsal, B. (Author & Presenter), Mridha, D. (Author), Basil, C. (Author), Casanova, J. (Author), Koenig, R. T. (Author), Khadka, K. (Author), **Antonangelo, J.** (Author), PMW Canola Workshop 2025, "OPTIMIZING SOIL BASE SATURATION FOR ENHANCED CANOLA PRODUCTION," Pacific Northwest Canola Association, Moscow, ID, United States of America. (January 29, 2025).
19. McFarland, C., Wieme, R., and **Antonangelo, J.A.** *No-Till Farmer* interview "Lime Application". Posted at *PNW Farmer's Network* YouTube channel https://www.youtube.com/watch?v=FenrUkhLJ04&t=30s (December 2024)
20. **Antonangelo, J.A.**, McFarland, C., and Wieme, R. "Soil Acidity, Lime, & Nutrient Management", Pullman, WA, United States. WSU Wheat Academy (December 2024).
21. **Antonangelo, J.A.** Timely topic "The Importance of Lime Application in Wheat Farming: Insights from 'No-Till Farmer' Interview". Published at (WSU Wheat & Small Grains extension website) https://smallgrains.wsu.edu/lime-no-till/. (August 2024).
22. **Antonangelo, J.A.**, Wieme, R., McFarland, C., and Esser, A. "Balancing Soil Base Saturation for Optimal Wheat Yield", WA, United States. WSU Wilke Field Day (June 2024).
23. Singh, S., Singh, S., **Antonangelo, J.A.**, Neely, H., and Koenig, R. "Survey for soil and plant micronutrients in dryland canola production", WA, ID, and OR, United States. (June 2024). https://s3.wp.wsu.edu/uploads/sites/3122/2024/05/FDA-2024-complete.pdf
24. **Antonangelo, J.A.** Timely topic "Nurturing Soil Health: The Importance of Liming for Optimal Yields". Published at (WSU Wheat & Small Grains extension website) https://smallgrains.wsu.edu/liming-yields/. (May 2024).
25. **Antonangelo, J.A.** *No-Till Farmer* article "Healthy Soil & Best Yields Require a Close-to-Neutral Soil pH". Published at https://www.no-tillfarmer.com/articles/13224-healthy-soil-and-best-yields-require-a-close-to-neutral-soil-ph. (April 2024).
26. **Antonangelo, J.A.** *No-Till Farmer* interview "Lime Application". Posted at *No-Till Farmer* YouTube channel https://www.youtube.com/watch?v=owu9KUW2Iy8 (February 2024)
27. **Antonangelo, J.A**. March Agronomic Training (The McGregor Company), "Soil Base Saturation: Importance, Implications, and How to Manage", Colfax, WA, United States. (March 2024).
28. **Antonangelo, J.A**. Acidic Soils Solutions: A PNW Soil Acidity Management Workshop Series, "Soil Base Saturation: Importance, Implications, and How to Manage", Clarkston, WA, United States. (January 2024).
29. **Antonangelo, J.A.**, Sitienei, I. (Presenter), and Zhang, H. 2023. 15th Annual KESSA (Kenya Scholars & Studies Association) Conference, "Biochar amendment of a metal contaminated soil partially immobilized Zn, Pb and Cd and reduced ryegrass uptake", Atlanta, GA, United States. (September 2023).
30. Eufrade Junior, H.J. (Presenter), **Antonangelo, J.A.**, and Silva Junior, F.G. 2023. 1st CCarbon Symposium, "Enhancing Agronomic Applications: A Comprehensive Scoping Review on

Biochar Feedstock Diversity and Carbon Stability", Piracicaba, Sao Paulo, Brazil. (December 2023).

31. Richardson, P., Tillewein, H., **Antonangelo, J.A.**, and Frederick, D. 2023. "Environmental Health and Cemetery Waste". TPHA 2023 Annual Meeting: Tennessee Public Health Association, Nashville, TN, United States. (September 2023).

32. Zhang, H., and **Antonangelo, J.A**. 2022. Potential Applications of Portable X-Ray Fluorescence Sensors for Precision Nutrient Management. 2022 ASA, CSSA, SSSA International Annual Meeting: Communication and Public Engagement for Healthy People and a Healthy Planet.

33. Antonangelo, J.A., Souza, J.L.B., Whitaker, A., Arnall, B., and Zhang, H. 2021. Evaluation of Mehlich-3 As a Multi-Element Extractant of Micronutrients and Sulfur in a Soil-Ryegrass System amended with varying Biochar rates from Two feedstocks. 2021 ASA, CSSA, SSSA International Annual Meeting: A Creative Economy for Sustainable Development.

34. Antonangelo, J., and Zhang. 2020. Influence of nitrogen from biochars application on cadmium removal by ryegrass in contaminated soil. ASA/CSSA/SSSA Virtual Meeting.

35. Abreu, L.F., Rocateli, A.C., Arnall, B., and **Antonangelo, J.** 2020. Evaluation of Sensor-Based Bermudagrass (*Cynodon dactylon* L. Pers.) Yield Prediction Models in Eastern Oklahoma. ASA/CSSA/SSSA Virtual Meeting.

36. Abreu, L.F., Rocateli, A.C., Manuchehri, M.R., and **Antonangelo, J.** 2020. Assessing Glyphosate Injury of Goodwell and Greenfield Bermudagrass. ASA/CSSA/SSSA Virtual Meeting.

37. Grove, J.H., Zhang, H., **Antonangelo, J.**, et al., 2019. Soil Test Based P and K Rate Recommendations across the Southeast: Similarities and Differences; Opportunities and Challenges. ASA/CSSA/SSSA meeting, San Antonio, TX, USA.

38. Abreu, L.F., Rocateli, A.C., Manuchehri, M.R., Arnall, B., and **Antonangelo, J.** 2019. Assessing Glyphosate Injury and Forage Bermudagrass Regrowth. ASA/CSSA/SSSA meeting, San Antonio, TX, USA.

39. Zhang, H., **Antonangelo, J.A.**, Alford, S., Florence, R., Grove, J., Hardy, D., Huluka, G., Lessel, J., Maguire, R., Mylavarapu R., Oldham. D., Pena-Yewtukhis, E.M., Provin, T., Slaton, N., Sotomayer, D. and Wang, J., 2019. Southern Region Soil Test Based P and K recommendations. SERA VI, Stillwater, OK, US. June 2019.

40. Antonangelo, J.A. and Zhang, H., 2018. Long-term phosphate fertilization on phosphorus speciation in an Oxisol under no-till by P-XANES. Plant and Soil Sciences Research Symposium (Oklahoma State University), Stillwater, OK, USA.

41. Antonangelo, J.A., Firmano, R.F., Colzato, M., Abdala, D.B., Oliveira Junior, A., Carvalho, H.P.C., Alleoni, L.R.F. and Zhang, H., 2018. Long-term continuous phosphate fertilization on phosphorus speciation in an Oxisol under no-till evaluated by P-XANES. 21st WCSS, Rio de Janeiro, RJ, Brazil. Invited to submit a manuscript to Special Edition of European Journal of Soil Science (2019).

42. Firmano, R.F., Melo, V.F., Oliveira Junior, **Antonangelo, J.A.** and Alleoni, L.R.F. 2018. Long-term continuous phosphate fertilization on phosphorus speciation in an Oxisol under no-till evaluated by P-XANES. 21st WCSS, Rio de Janeiro, RJ, Brazil.

43. Santos, S.M.C., **Antonangelo, J.A.**, Serafim, G.M., Melo, T.M.P. and Büll, L.T., 2018. Teores de cálcio e magnésio em Latossolo após aplicação de resíduos industriais e urbanos. Cadernos de Agroecologia – ISSN 2236-7934 – V. 13, N. 2, Dez. 2018.

44. Santos, S.M.C., **Antonangelo, J.A.**, Deus, A.C.F., Büll, L.T. and Melo, T.M.P., 2018. Teores de zinco no solo após aplicação de resíduos em superfície. In: XIII Semana Agronômica de Cassilândia VI Semana de Pesquisa da Pós-Graduação, Cassilândia, MS, Brazil. Anais da VI Semana de Pesquisa da Pós-Graduação. (*In Portuguese*).

45. Antonangelo, J.A. and Zhang, H., 2017. Nutrient dynamics and phosphorus speciation in a highly weathered soil under long-term no-till system. Plant and Soil Sciences Research Symposium (Oklahoma State University), Stillwater, OK, USA.

46. Antonangelo, J.A. and Zhang, H., 2017. Nutrient dynamics and phosphorus speciation in a highly weathered soil under long-term no-till system. ASA/CSSA/SSSA meeting, Tampa, FL, USA.

47. Antonangelo, J.A. and Zhang, H., 2017. Nutrient dynamics and phosphorus speciation in a highly weathered soil under long-term no-till system. OSU Soil Biology Symposium, Stillwater, OK, USA.

48. Antonangelo, J.A., Firmano, R.F., Colzato, M., Abdala, D.B., Oliveira Junior, A., Carvalho, H.P.C., Alleoni, L.R.F. and Zhang, H., 2017. Long-term phosphate fertilization on phosphorus speciation in an Oxisol under no-till by P-XANES. LNLS - 27th Annual Users Meeting (RAU), Campinas, SP, Brazil.

49. Antonangelo, J.A., Alleoni, L.R.F. and Kinrade, S.D., 2014. Analysis of silicon, aluminum and pH in an Oxisol under no-till farming conditions after lime and silicate application. Lakehead University (LU) Symposium, Thunder Bay, ON, Canada.

50. Antonangelo, J.A., Alleoni, L.R.F. and Kinrade, S.D., 2014. Quantitative analysis of aluminum in tropical soil solutions by nuclear magnetic resonance spectroscopy (^{27}Al-NMR). Lakehead University (LU) Seminars, Thunder Bay, ON, Canada.

51. Brandao, G.F., **Antonangelo, J.A.**, Santos, S.M.C., Büll, L.T., Deus, A.C.F. and Freiberger, M.B., 2013. Atributos químicos de um Latossolo Vermelho distrófico influenciados pela aplicação de Lama cal e Lodo de esgoto centrifugado em sistema plantio direto. In: XXXIV Congresso Brasileiro de Ciência do Solo, Florianópolis, SC, Brazil. Anais do XXXIV Congresso Brasileiro de Ciência do Solo. (*In Portuguese*).

52. Santos, S.M.C., Büll, L.T., **Antonangelo, J.A.**, Deus, A.C.F. and Sandim, A.S., 2012. Diagnose foliar e produção de matéria seca da cultura da aveia em função das doses de aplicação de resíduos em plantio direto. In: FERTBIO 2012, Maceió, Al, Brazil - A responsabilidade Social da Pesquisa Agrícola. (*In Portuguese*).

53. Santos, S.M.C., Büll, L.T., **Antonangelo, J.A.**, Deus, A.C.F. and Sandim, A.S., 2012. Diagnose foliar e produção de soja após aplicação de resíduos urbanos e industriais em sistema plantio direto. In: FERTBIO 2012, Maceió, Al, Brazil - A responsabilidade Social da Pesquisa Agrícola. (*In Portuguese*).

54. Silva, M.A.G., Büll, L.T., Corrêa, J.C., Freitag, E.E. and **Antonangelo, J.A.**, 2011. Micronutrient contents and yield of soybean as a function of industrial and urban residue reuse. In: Fundamental for life: Soil, Crop, & Environmental Sciences, San Antonio, TX, USA.

55. Antonangelo, J.A., Miggiolaro, A.E., Büll, L.T., Fernandes, D.M. and Silva, M.A.G., 2011. Cu, Fe, Mn, Zn e produção da soja após reaplicação superficial de lodo de esgoto, lama cal e escória de aciaria em sistema semeadura direta. In: XXIII Congresso de Iniciação Científica da Unesp (XXIII CIC) – 1st Phase, Botucatu, SP, Brazil. Anais do Congresso. Second Place (*In Portuguese*).

56. Antonangelo, J.A., Miggiolaro, A.E., Büll, L.T., Fernandes, D.M. and Silva, M.A.G., 2011. Cu, Fe, Mn, Zn e produção da soja após reaplicação superficial de lodo de esgoto, lama cal e escória de aciaria em sistema semeadura direta. In: XXIII Congresso de Iniciação Científica da Unesp (XXIII CIC) – 2nd Phase, Aguas de Sao Pedro, SP, Brazil. Anais do Congresso. (*In Portuguese*).

57. Antonangelo, J.A., Miggiolaro, A.E., Fernandes, D.M. and Büll, L.T., 2011. Micronutriente foliar na cultura do sorgo em função da aplicação de resíduos urbano e industrial em sistema de semeadura direta. XXXIII Congresso Brasileiro de Ciência do Solo. Solos nos biomas brasileiros: Sustentabilidade e mudanças climáticas, Uberlandia, MG, Brazil. (*In Portuguese*).

58. Büll, L.T., Silva, M.A.G., Corrêa, J.C., Freitag, E.E. and **Antonangelo, J.A.**, 2011. Bioavailability of metals in no tillage soybean crop as influenced by sewage sludge and industrial residues. In: Fundamental for life: Soil, Crop, & Environmental Sciences, San Antonio, TX, USA.

59. Miggiolaro, A.E., **Antonangelo, J.A.**, Fernandes, D.M. and Büll, L.T., 2011. Produtividade da cultura da soja após aplicação superficial de lodo de esgoto, escória de aciaria e lama cal em sistema de semedura direta. XXXIII Congresso Brasileiro de Ciência do Solo. Solos nos biomas brasileiros: Sustentabilidade e mudanças climáticas, Uberlandia, MG, Brazil. (*In Portuguese*).

60. **Antonangelo, J.A.**, Miggiolaro, A.E., Büll, L.T. and Fernandes, D.M., 2010. Carbono microbiano de um latossolo vermelho distrófico após aplicação de resíduos industriais e urbanos em semeadura direta. In: 6ª Mostra científica em ciências agrárias, 14ª mostra científica da FMVZ e 17ª reunião científica em ciências agrárias, Botucatu, SP, Brazil. (*In Portuguese*).

61. **Antonangelo, J.A.**, Miggiolaro, A.E., Büll, L.T. and Fernandes, D.M., 2010. Composição química de um Latossolo Vermelho Distrófico após a quarta aplicação de resíduos industriais e urbanos sob sistema plantio direto. XXII Congresso de Iniciação Científica da UNESP - Área de Agrárias (1ª fase). (*In Portuguese*).

Research and Extension Reports (17)

1. **Antonangelo, J. A.**, Koenig, R. T. 2026. Balancing Soil Base Saturation for Optimal Wheat Yield: A pH-Driven Approach.
2. **Antonangelo, J. A.**, Koenig, R. T. 2026. Optimizing Canola Production through Depth-Specific Lime Application and Soil Stratification Analysis.
3. **Antonangelo, J. A.**, Koenig, R. T. 2025. Balancing Soil Base Saturation for Optimal Wheat Yield: A pH-Driven Approach.
4. **Antonangelo, J. A.**, Koenig, R. T. 2025. Optimizing Canola Production through Depth-Specific Lime Application and Soil Stratification Analysis.
5. **Antonangelo, J. A.**, Koenig, R. T. 2025. Optimizing Soil Base Saturation for Enhanced Canola Production.
6. Lyon, D., **Antonangelo, J. A.**, et al. 2025. Extension Education for Wheat and Barley Growers.
7. Lyon, D., **Antonangelo, J. A.**, et al. 2024. Extension Education for Wheat and Barley Growers.
8. Lyon, D., **Antonangelo, J. A.**, et al. 2023. Extension Education for Wheat and Barley Growers.
9. Massey, J.R., Brandenberger, L., Carrier, L., Zhang, H., **J.A. Antonangelo**, and G. Kuepper. 2021. Bio-Intensive Cover Cropping for Vegetables.
10. Massey, J.R., Brandenberger, L., Carrier, L., Zhang, H., **J.A. Antonangelo**, and G. Kuepper. 2021. Bio-Intensive Cover Cropping for Soil Improvement Cimarron Valley Research Station.
11. Massey, J.R., Brandenberger, L., Carrier, L., Zhang, H., **J.A. Antonangelo**, and G. Kuepper. 2020. Bio-Intensive Cover Cropping for Vegetable Crop Production.
12. Massey, J.R., Brandenberger, L., Carrier, L., Zhang, H., **J.A. Antonangelo**, and G. Kuepper. 2020. Bio-Intensive Cover Cropping for Soil Improvement.
13. **Antonangelo, J.A., and** Alleoni, L.R.F. 2015. Forms of silicon in an Oxisol under no-till as a function of surface application of calcium-magnesium silicate in a long-term experiment. 2015. Research Report submitted to the funding agency.
14. **Antonangelo, J.A.,** and Büll, L.T. 2010. Crop rotation under no-till system on dry winter region as a function of urban and industrial wastes application. Research Report submitted to the funding agency.
15. **Antonangelo, J.A.,** and Büll, L.T. 2011. Chemical changes in soil and plants tissue after application of urban and industrial wastes in an Oxisol under no-till. Research Report submitted to the funding agency.

16. **Antonangelo, J.A.,** and Büll, L.T. 2012. Phosphorus availability for soybean cultivated in soil treated with urban and industrial wastes under no-till. Research Report submitted to the funding agency.
17. **Antonangelo, J.A.**, Kinrade, S.D., and Alleoni, L.R.F. 2014. Quantitative analysis of aluminum in tropical soil solutions by nuclear magnetic resonance spectroscopy (^{27}Al-NMR). Research Report submitted to the funding agency.

Awards and Recognitions (12)

1. Soil Science Society of America: Soil & Water Management & Conservation Young Scholar Award. 2023 ASA, CSSA, SSSA International Annual Meeting: Open Science Inspires. St. Louis, MO. **2023**
2. American Society of Agronomy: Environmental Quality Inspiring Young Scientist. 2021 ASA, CSSA, SSSA International Annual Meeting: A Creative Economy for Sustainable Development. Salt Lake City, UT. **2021**
3. Outstanding Ph.D. Student in Plant and Soil Sciences, Oklahoma State University. **2019**
4. Recipient of the Dale E. and Ardith H. Weibel Memorial Endowed Scholarship, Oklahoma State University. Department of Plant and Soil Sciences. **2018**
5. Recipient of the Dale E. and Ardith H. Weibel Memorial Endowed Scholarship, Oklahoma State University. Department of Plant and Soil Sciences. **2017**
6. FAPESP Scholarship abroad. Wrote a grant proposal and was funded for 6 months to study the chemical speciation of aluminum in an Oxisol cultivated with rice under long-term NT employing nuclear magnetic resonance spectroscopy (NMR). **2014**
7. FAPESP Scholarship in Brazil. Wrote a grant proposal and was funded for 12 months to study the chemical speciation of silicon and aluminum in an Oxisol cultivated with rice under long-term NT employing soil solution extraction. **2013**
8. Highest GPA in the 2010 Horticulture Class. “Professor Dr. Tosiaki Kimoto” Award. Financially granted by the “Kunito Miyasaka” Foundation. Department of Horticulture, Sao Paulo State University (UNESP), Botucatu, SP, Brazil. **2012**
9. Second Place in Undergraduate Student Oral Competition. XXIII Congress of Scientific Initiation of Sao Paulo State University (UNESP), Botucatu, SP, Brazil. **2011**
10. FAPESP Scholarship in Brazil. Wrote a grant proposal and was funded for 12 months to study phosphorus fractionation in an Oxisol under NT cultivated with soybean and received surface application of urban and industrial wastes. **2011**
11. FAPESP Scholarship in Brazil. Wrote a grant proposal and was funded for 12 months to study changes in soil chemical attributes and plant tissue cultivated in an Oxisol under NT that received surface application of urban and industrial wastes. **2010**
12. CNPq/PIBIC Scholarship in Brazil. Wrote a grant proposal and was funded for 12 months to study changes in soil chemical attributes, plant tissue and crops yield under rotation in an Oxisol under NT that received surface application of urban and industrial wastes. **2009**

Professional Services and Leaderships (32+)

1. Soil Science Society of America (SSSA) Journal Editorial Board. SSSAJ Associate Editor, Soil Chemistry Division. *Soil Science Society of America Journal* (*SSSAJ*). **Jan 2026 – Current**
2. Committee member of Ph.D. Dissertation Defense. Ph.D candidate: Lucas Jonatan Rodrigues da Silva. Disseration title (in Portuguese): *INTERAÇÃO FOSFATO × SILICATO: IMPLICACOES NA SORÇÃO DE FOSFORO E NA EFICIÊNCIA AGRONÔMICA DE FERTILIZANTES FOSFATADOS*. Sao Paulo State University, School of Agricultural Sciences, Botucatu, Sao Paulo, Brazil. **Oct 24, 2025**
3. Review Textbook Proposal "Soil: The Basics" (Taylor & Francis Group, *The Basics* series). **2025**

4. Reviewer of book Proposal "Biochar: Primary, Allied, and Advanced Applications" (***Elsevier***). **2025**
5. Reviewer of Research Grant Proposal “XRF-CACAO: Development of a system for land suitability zoning and cadmium assessment in cocoa soil profiles (Theobroma Cacao) using X-ray fluorescence (XRF), LiDAR, and remote sensing in the Amazonas department” to the **National Program for Scientific Research and Advanced Studies (PROCIENCIA) – CONCYTEC, Peru – Technological Development Proposals** **2025**
6. Editorial Board member of *Energia na Agricultura* **2025 – Current**
7. Nutrient Management Research/Advisory Group **2024 – Current**
8. Member of The Washington Oilseed Cropping Systems Team. Research and Extension. Washinton State University. **2024 – Current**
9. Program Coordinator (Soils Grad Coordinator), Graduate College, Dept of Crop and Soil Sciences, Washington State University. **2024 – Current**
10. Member of The WSU Extension Dryland Cropping Systems Team. Washinton State University. **2023 – Current**
11. Wheat Life Magazine guest author. Washington Grain Commission. **2024 – Current**
12. Diversity, Equity, and Inclusion Committee Member. Washington State University, Dept. of Crop and Soil Sciences. **2023 – Current**
13. Member of Swantz Teaching & Learning Community. Washinton State University. **2024 – Current**
14. Researcher at the Silicon Research Group in the ‘SiSPplant Soil-Plant System’. Sao Paulo State University, Botucatu, SP, Brazil. National Counsel of Technological and Scientific Development (CNPq) **2023 – Current**
15. Editorial Board member of ESSOAr (Earth and Space Science Open Archive) **2021 – Current**
16. Youth editorial board member of *Biochar* and *Carbon Research* (***Springer***) **2021 – Current**
17. Guest editor of Land (MDPI) Special Issue "Effect of Biochar on Soil Fertility and Agricultural Sustainability" **2022**
18. Guest editor of Frontiers in Plant Science Special Issue "Application and Mechanism of Plant Biostimulants, Biochar, Fertilizer Products, and Other Nutrition-related Agrochemicals" **2024** Editorial Publication: https://www.frontiersin.org/journals/plant-science/articles/10.3389/fpls.2025.1570209/full
19. Reviewer, International Consultant and Ethics Committee Member of the Brazilian Journal of Irrigation and Drainage (UNESP, Botucatu, SP, Brazil). **2015 – Current**
20. Reviewer of Textbook Proposal "Re-Conceptualizing the Soil Carbon Nexus & Visualizing its role in Agro-ecosystem" (***CRC Press, Taylor & Francis Group***). **2023**
21. Reviewer of Research Grant Proposal “Improving soil quality for specialty crops through compost-biochar amendments with nano-fertilization and salicylic acid chemigation” submitted to **BARD - The US-Israel Agricultural Research & Development Fund**. **2023**
22. Reviewer of the Agricultural Water Management journal (AGWAT), Chemosphere, Journal of Environmental Management (JEMA), Resources Environment and Sustainability (RESENV), Waste Management, Geoderma, Geoderma Regional, Saudi Journal of Biological Sciences, Cogent Food and Agriculture, and Pedobiologia – Journal of Soil Ecology, Field Crops Research, Environmental Advances, Farming System, Journal of Cleaner Production, Science of the Total Environment, Soil and Tillage Research (***Elsevier***), Biomass Conversion and Biorefinery, Environmental Science and Pollution Research, Scientific Reports, Biochar, Carbon Research, Precision Agriculture, Journal of Soil Science and Plant Nutrition, and Environmental Monitoring and Assessment (EMAS) (***Springer***). **2019 – Current**
23. Reviewer of Minerals, Agronomy, Land, Sustainability, and Agriculture (***MDPI***) **2019 – Current**

24. Reviewer of the Agricultural Geosciences and Environment, Soil Use and Management, Soil Science Society of America Journal, and GCB Bioenergy - Bioenergy & the Environment, Environmental Toxicology (***Wiley***) **2020 – Current**
25. Reviewer of Geology, Ecology, and Landscapes (***Taylor & Francis***) **2022 – Current**
26. Reviewer of the AIMS Agricultural and Food **2021 – Current**
27. Reviewer of the Phyton – International Journal of Experimental Botany **2021 – Current**
28. Reviewer of Ingeniería e Investigación **2021 – Current**
29. Led two research conducted at Brazilian Synchrotron Light Laboratory (Campinas, SP, Brazil) from proposals successfully approved to use the instruments there as one of few applicants from many applications. **2017 - 2018**
30. Judge for undergraduate student oral presentation competitions. XXIII International Symposium of Scientific and Technological Initiation of the University of Sao Paulo. **2015**
31. Judge for 2022 Undergraduate Research Symposium Oklahoma State University. **2022**
32. Monitor of the Specialization Course in Soil Management, collaborating in the disciplines: 53140 - Soil Biology and Fertility; 53141 - Soil conservation and land use planning; 53142 – Plant Nutrition and Fertilization; 53143 - Soil as a Physical Medium for Plant Growth; 53144 - Techniques for Thesis and Monography preparation. **2015**

Professional Skills (5+)

1. Language: English (fluent), Portuguese (native), and Spanish (basic-intermediate).
2. Field and Controlled Environment Trials: Trained in establishing field/greenhouse/growth chambers trials and experimental designs.
3. Laboratory: Proficient in soil testing and plant analyses.
4. Software: Knowledgeable in computer science, including Office Package, Internet, AutoCAD, ArcGIS (mapping); Statistical Software: Sisvar, Statistica, OriginPro, RStudio, Sigma Plot, JMP, and SAS; VisualMINTEQ (chemical speciation of soil solution, liquid-state), Athena (soil chemical speciation of elements in solid-state) and SpinWorks (chemical speciation through spectroscopy from NMR technique).
5. Instrumentation: Operated ICP (for multi-elemental analyses), XRD (X-ray diffraction for soil mineralogy analyses), NMR (Nuclear Magnetic Resonance Spectroscopy for soil solution speciation), XRF (X-ray fluorescence), pXRF (portable X-ray fluorescence), µXRF (X-ray fluorescence microanalysis for elements mapping), X-ray spectroscopy (Synchrotron beamline), FT-IR, Surface Area Analyzer, and other basic soil and water analytical instruments.

Professional and Honor Societies Membership (6)

1. WERA103: Nutrient Management and Water Quality **2024 – Current**
2. American Society of Agronomy (ASA) **2016 – 2022**
3. Crop Science Society of America (CSSA) **2016 – 2022**
4. Soil Science Society of America (SSSA) **2016 - Current**
5. The Honor Society of Phi Kappa Phi (Oklahoma State University) ***Invited***
6. The Society for Collegiate Leadership & Achievement – SCLA ***Invited***

Supervision, advisement, and mentorship (19)

Postdoctoral Supervision (1)

1. Deepanjan Mridha. Postdoctoral Researcher, Washington State University, Department of Crop and Soil Sciences. **Sep 2024 – Present**

Graduate Student Advising and Mentoring (5)

1. Leah Chidziwe. M.S. in Soil Science, Washington State University. Major Advisor and Chair of Thesis: *Fluid Lime Transport in No-till Systems: Impacts on Nutrient Availability, Grain Yield, and Quality.* **Jan 2025 – Dec 2026**
2. Bishal Lamsal. M.S. in Soil Science, Washington State University. Major Advisor and Chair of Thesis: *Optimizing Soil Base Saturation for Enhanced Canola Production.* **Aug 2024 – Jul 2026**
3. Cawayne Bryan. M.S. in Soil Science, Washington State University. Major Advisor and Chair of Thesis: *Optimizing Canola Production through Depth-Specific Lime Application.* **Aug 2024 – Jul 2026**
4. Ekom-Obong Solomon Idio. M.S. in Plant Science, Washington State University. Thesis Committee Member: *Elucidating the response of pennycress and canola to metal stress.* **Jan 2024 – Dec 2025**
5. Rinkal Saini. Technical Assistant I (research mentoring and supervision). **May 2024 – Jan 2025**

Undergraduate Student Advising and Mentoring (13)

1. Tainah Caroline Arruda Alves de Lima. Undergraduate Research. Term Paper: *Influência do silicato sobre as formas de fósforo em solos oxídicos* (Brazilian Portuguese; Abstract in English). Fall 2025. São Paulo State University (UNESP), Botucatu, São Paulo, Brazil. **Sep 2025**
2. João Vitor de Souza Mendes. Undergraduate Research. Term Paper: *Avaliação do silício disponível em dois solos tropicais utilizando diferentes extratores químicos* (Brazilian Portuguese; Abstract in English). Fall 2025. São Paulo State University (UNESP), Botucatu, São Paulo, Brazil. **Sep 2025**
3. Ayanna Miranda. Undergraduate Research. REEU Ag Data Science Program. Washington State University, Department of Crop and Soil Sciences. **Jun 2025 – Aug 2025**
4. Patrick Richardson. B.S. (ongoing) in Health and Human Performance (Public Health concentration). Co-advised and mentored undergraduate research project *"The Environmental Health Impact of Cemetery Waste."* Austin Peay State University. **2022 – 2024**
5. Murilo Oliveira. B.S. in Agricultural Engineering. Advisor, Extension Term Paper: *"Sulfur as precursor of soybean nodulation."* **2016**
6. Luís Eduardo Onishi Zanardo. Committee Member, Extension Term Paper: *"Use of gypsum for agricultural crops."* **2016**
7. Alexandre Volpon. Committee Member, Extension Term Paper: *"Use of microorganisms to release phosphorus adsorbed in soil clay."* **2016**
8. Leandro Augusto Belo. Committee Member, Extension Term Paper: *"Effects of humic and fulvic acids on the adsorption and desorption of herbicides in soil."* **2016**
9. Jair Aparecido Bonfante. Committee Member, Extension Term Paper: *"Inoculation of* Azospirillum brasiliense *on maize seeds."* **2016**
10. Fabio Scudeler. Committee Member, Extension Term Paper: *"Sulfur and boron management for soybean crop."* **2016**
11. Luis Anselmo Stringhini. Committee Member, Extension Term Paper: *"Humic acids in phosphate fertilizers and their effects on soil phosphorus."* **2016**
12. Érika Monteiro. Hourly Undergraduate Students. **2013 – 2014**
13. Luan Freitas. Hourly Undergraduate Students. **2013 – 2014**

Event Organization (3)

1. **Antonangelo, J.A.**, Sakaran, S., and Singh S. 2025. Washington Statewide tour. Washington State University, Department of Crop and Soil Sciences. Approximate attendance: 25

2. Culman, S., Liu, R., **Antonangelo, J.A.**, Singh, S., and Singh S. 2024. Washington Statewide tour. Washington State University, Department of Crop and Soil Sciences. Approximate attendance: 30
3. **Antonangelo, J.A.**, Imaizumi, V.M., Martins, A.R.H. and Souza, J.V.R.S., 2011. Conference "Botucatu Week of Agricultural Studies (SEAB)". Technological Innovations in Agricultural Machinery and Implements. Co-organization with Drs. Kleber Pereira Lanças and Paulo Arbex. Approximate attendance: 80.

Training (4)

1. Handheld X-ray Fluorescence (XRF) analyzer. Washington State University, Pullman, WA, USA. **2024**
2. Handheld X-ray Fluorescence (XRF) analyzer. Oklahoma State University, Stillwater, OK, USA. **2019**
3. Management of waste generated in teaching and research laboratories. USP, Piracicaba, SP, Brazil. **2015**
4. Tropical Cropping Systems and Sustainability. Oklahoma State University, Stillwater, OK, USA. **2012**

Teaching Experience (24)

1. SOIL_SCI_502 – Advanced Topics in Soils. Fall 2025. Washington State University.
   11 graduate students. **Fall 2025**
2. CROP_SCI_512 – Topics in Crop Science. Fall 2025. Washington State University.
   5 graduate students. **Fall 2025**
3. SOIL_SCI_105 – Applied Chemistry in Soils, Agricultural, and Environmental Sciences. Fall 2025. Washington State University.
   10 undergraduate students. **Fall 2025**
4. AGRI 4230 – Land Use. Summer 2023. Austin Peay State University.
   15 undergraduate students. **Summer 2023**
5. AGRI 1040 – Environmental Science. Spring 2023. Austin Peay State University.
   14 undergraduate students. **Spring 2023**
6. AGRI 4220 – Soils and Water Conservation. Spring 2023. Austin Peay State University.
   18 undergraduate students. **Spring 2023**
7. AGRI 4221 – Soils and Water Conservation w/ lab. Spring 2023. Austin Peay State University.
   18 undergraduate students. **Spring 2023**
8. AGRI 4230 – Land Use. Spring 2023. Austin Peay State University.
   36 undergraduate students. **Spring 2023**
9. AGRI 4230 – Land Use. Winter 2022-2023. Austin Peay State University.
   6 undergraduate students. **Winter 2022-2023**
10. AGRI 2210 - Soils. Fall 2022. Austin Peay State University.
    28 undergraduate students. **Fall 2022**
11. AGRI 2211 – Soil w/ lab. Fall 2022. Austin Peay State University.
    28 undergraduate students. **Fall 2022**
12. AGRI 3210 – Fertilizers and Soil Fertility. Fall 2022. Austin Peay State University.
    8 undergarduate students. **Fall 2022**
13. Full semester course as a TA on "SOIL 4893 – Soil Chemical Processes and Environmental Quality", OSU. The course focused on the biogeochemical processes in soil systems, environmental quality, environmental chemistry, soil remediation and biogeochemical investigation and speciation using VisualMINTEQ software (OSU). **2018**

14. Gave two lectures on the Chemistry of Highly Weathered Tropical Soils; and Long-term continuous phosphate fertilization on phosphorus speciation in an Oxisol under no-till by P-XANES (OSU). **2018**
15. Gave one lecture on Oxisols to the graduate course "LSN5845-6/2 Soil Genesis and Morphology" (USP/ESALQ). **2016**
16. Gave one lecture on Soil Organisms and Living Beings to the graduate course "LSN5845-6/2 Soil Genesis and Morphology" course (USP/ESALQ). **2016**
17. Gave one lecture on Saline, Saline-sodic and Sodic Soils to the graduate course "LSN5845-6/2 Soil Genesis and Morphology" course (USP/ESALQ). **2016**
18. Gave one lecture on Phosphorus Leaching to the graduate course "LSN5890-4/3 Soil Geochemistry" (USP/ESALQ). **2016**
19. Gave one lecture on Aluminum Biogeochemistry to the graduate course "LSN5890-4/3 Soil Geochemistry" (USP/ESALQ). **2016**
20. Gave one lecture on Persistence of soil organic matter as an ecosystem property to the graduate course "LSN5897-3/4 Soil Organic Matter" (USP/ESALQ). **2016**
21. Gave one lecture on Electrochemical properties of soil organic matter to the graduate course "LSN5897-3/4 Soil Organic Matter" (USP/ESALQ). **2016**
22. Gave one lecture on Forages Fertilization to the graduate course "LSN5810-5/2 Fertilizers and Fertilization" (USP/ESALQ). **2015**
23. Gave one lecture on Soil Colloidal Fraction to the graduate course "LSN5810-5/2 Fertilizers and Fertilization" (USP/ESALQ). **2015**
24. Gave one lecture on Sulfur and Nitrogen for Forage Grasses to the graduate course "LSN5880-4/2 Nutrition and Fertilization of Forage Plants" (USP/ESALQ). **2015**

Guest Lecture (6)

1. ENSC 353 – Environmental Biogeochemistry. *Biochar Electrochemical Properties (Impact on Soil Quality and Crops)*. Montana State University. 30 undergraduate students. **Spring 2025**
2. LBE6002 – Industrial Crops and Products for Bioenergy. *Biochar Electrochemical Properties (Impact on Soil Quality and Crops)*. University of Sao Paulo. 6 graduate students. **Spring 2025**
3. CE 415/515 – Environmental Measurements. Washington State University. *Demonstration of portable (handheld) X-ray fluorescence analysis in plant samples*. 12 graduate students. **Fall 2024**
4. Soil_Sci 441 – Soil Fertility. Washington State University. *Soil Acidity: Importance, Implications, and Management*. 27 undergraduate students. **Spring 2024–25**
5. Soil_Sci 441 – Soil Fertility. Washington State University. *Soil Salinity and Sodicity*. 27 undergraduate students. **Spring 2024–25**
6. Soil_Sci 498 – Professional Internship. Washington State University. *A Research Pathway: How to Present?* 10 students (*conjoint*). **Spring 2024**

Additional Information

1. https://bv.fapesp.br/en/pesquisador/85334/joao-arthur-antonangelo
2. https://cahnrs.wsu.edu/people-directory/people/wsu-profile/joao.antonangelo/?_gl=1*2vnxd5*_ga*MTU3MDExMDM2NC4xNjkwMzk0Mjg0*_ga_4QMXCEN73L*MTcxNTk3ODc5Mi4xMjIuMS4xNzE1OTc4ODgxLjYwLjAuMA..*_ga_NTJ05XEX4W*MTcxNTk3ODc5Mi4xMjIuMS4xNzE1OTc4ODgxLjYwLjAuMA..*_ga_2V1N389LGK*MTcxNTk3ODc5Mi4xMjIuMS4xNzE1OTc4ODgxLjYwLjAuMA..*_ga_X79E113SVP*MTcxNTk3ODc5Mi4xMjIuMS4xNzE1OTc4ODgxLjYwLjAuMA