Engil Pereira, PhD

Associate Professor School of Earth, Environmental, and Marine Sciences The University of Texas Rio Grande Valley E-mail: <u>engil.pereira@utrgv.edu</u> Website: <u>SoilEcologyLab.com</u>

Academic background

2014 - 2017	Postdoctoral Fellow, Swiss Federal Institute of Technology, ETH, Switzerland
2010 - 2014	Ph.D. Horticulture and Agronomy, University of California, Davis, USA.
2008 - 2010	M.Sc. Horticulture and Agronomy, University of California, Davis, USA.
2002 - 2007	B.Sc. Agronomic Engineering, Federal University of Santa Maria, Brazil.

Appointments

2023 - Present	Associate Professor, The University of Texas Rio Grande Valley, USA
2023 - Present	Graduate Program Coordinator, The University of Texas Rio Grande Valley, USA
2018 - 2023	Assistant Professor, The University of Texas Rio Grande Valley, USA
2016 - 2018	Visiting Professor, Sao Paulo State University, Brazil
2014 - 2017	Postdoctoral Fellow, Swiss Federal Institute of Technology, ETH, Switzerland
2013 - 2014	Visiting Student, Swiss Federal Institute of Technology, ETH, Switzerland
2012 - 2012	Teaching Assistant, University of California, Davis, USA
2008 - 2014	Graduate Student Researcher, University of California, Davis, USA

Awarded grants

- 2024 2029 Expanding Soil Science and Engineering Internship Experiences for Students. PI: Pereira. USDA-NRCS. Funded for \$450,000.
- 2024 2026 Biochar Filter Socks for Stormwater Management in the US-Mexico Border. PI: Kang, Co-PI Pereira. Border 2025 U.S. Mexico Program. Funded for \$75,000.
- 2023 2027 Climate-Smart Organic Sorghum Partnership for Grain and Silage Production. USDA Organic Agriculture Research & Extension Initiative. Funded for \$130,000. Subaward from a \$3.5M grant to Texas A&M.
- 2023 2025 Remote-sensing and Analytics for Integrating Science Education with NASA SMD to Strengthen Student Research Capacity at MSI. PI: Dong. Co-PI: Pereira. NASA. Funded for \$1,199,372.
- 2023 2027 Validating agrivoltaic technology with underserved agricultural. PI: Pereira. USDA-NRCS. Funded for \$2,397,121.86.
- 2023 2025 Expanding Soil Science and Engineering NRCS Training and Immersive Experiences for Advancement and Learning. PI: Pereira. USDA-NRCS. Funded for \$90,000.
- 2023 2026 Science and Technology Acquisition and Retention (STARs). PI: Pereira. The University of Texas System. Funded for \$500,000.
- 2022 2027 Texas Climate-Smart Initiative. PI: Pereira, Co-PI Feria. USDA Partnerships for Climate-Smart Commodities Program. Funded for \$1,400,000. Subaward from a \$65M grant to Texas A&M.
- 2022 2024 Widening internships at NRCS for UTRGV students. PI: Pereira. USDA-NRCS. Funded for \$90,000.
- 2022 2027 Pathways to NRCS and academic careers to civil engineering and agriculture students. PI: Pereira. USDA-NIFA-EWD-REEU. Funded for \$750,000.
- 2022 2024 Greenhouse gas flux response in biochar- and compost-amended urban soils under simulated soil hydrologic dynamics. PI: Kang, Co-PI Pereira. DOE Research Development and Partnership Pilot (RDPP). Funded for \$150,000.
- 2020 2022 Science of Soil Health and Dynamic Soil Properties in Arid Subtropical Environments of South Texas. PI: Racelis, Co-PI: Pereira. USDA-NRCS. Funded for \$250,000.

- 2021 2024 Families and University Together as a Unit for Research and Education (FUTURE): Connecting Hispanic Families to Geosciences Through Community Informal Learning Network. PI: Chu-Lin Cheng, Co-PI: Pereira. NSF-GEOPATHS. Funded for \$315,000.
- 2019 2022 Expanding Training, Research, and Education in Soil Science. PI: Pereira. USDA-NRCS. Funded for \$35,000.
- 2018 2022 Training, Research, and Education in Soil Science. PI: Pereira; Co-PIs: Cheng, Kang. USDA-NIFA. Funded for \$275,000.
- 2018 2021 A chronosequence to estimate above- and below- ground carbon capture in Tamaulipan thornscrub of the Lower Rio Grande Valley, Texas. PI: Christoffersen; Co-PI: Pereira. Land Life Company. Funded for \$26,000.
- 2018 2019 Linking Microbiomes to Soil Microenvironments. PI: Pereira; Co-PI: Lowe UTRGV College of Sciences, Seed Grant Program. Funded for \$24,700.
- 2015 2019 Towards nutritional security through organic management of soil fertility in orange-fleshed sweet potato systems in Mozambique. PI: Six; Co-PIs: *Pereira, Andrade. Mercator Foundation, Switzerland. Funded for \$234,850.
- 2014 2016 Maintaining supply while reducing losses of N in cropping systems: Feedbacks between plant, soil and microbial communities. PI: Pereira. Zurich-Basel Plant Science Center. Funded for \$54,130.
- 2014 2018 A comprehensive examination of nitrogen cycling and microbial communities within soil microenvironments in integrated organic farming systems in Switzerland. PI: Six; Co-PIs: Pereira, van der Heijden. Mercator Foundation, Switzerland. Funded for \$245,000.
- 2014 2016 Integrated soil fertility management for sweet potato in Mozambique. PI: Pereira. Swiss African Research Cooperation, UniBasel. Research Seed Grant funded for \$10,000.

<u>Peer-reviewed publications</u> (total = 34; h-index = 18)

- Colunga, S., Wahab, L., Fierro Cabo, A., & Pereira, E. (2025). Carbon sequestration through conservation tillage in sandy soils of arid and semi-arid climates: A meta-analysis. Soil & Tillage Research, 245, 106310. https://doi.org/10.1016/j.still.2025.106310
- 2. Kang, J. J., Flores, A., Pereira, E. I. P., & Ho, J. (2024). Urban Soil Compaction Remediation by Shallow Tillage and Compost in Hydroseeded Lawn. Open Journal of Soil Science, 14 (7), 399-415.
- Sena, K. N., Boni, T. S., Maltoni, K. L., Cassiolato, A. M. R., & Pujol Pereira, E. I. (2023). Post-Harvest Eucalyptus Residue Removal Reduces Soil Aggregation and Biological Activities in Central-West Brazil. Sustainability, 15(11), 8790.
- 4. Elliott-Vidaurri, L. V., Martinez, I., Pereira, E., Penn, H. J., & Choudhury, R. A. (2023). Tree canopy cover and elevation affect the distribution of red harvester ant nests in a peri-urban setting. Environmental Entomology, 52(3), 510-520. https://doi.org/10.1093/ee/nvad025
- Boni, T. S., Pereira, E., Santos, A. A., Cassiolato, A. M. R., Maltoni, K. L. (2022). Biomass residues improve soil chemical and biological properties reestablishing native species in an exposed subsoil in Brazilian Cerrado. Plos One17(6): e0270215 doi: 10.1371/journal.pone.0270215
- 6. Wilde, B. C., Lieberherr, E., **Pereira, E.**, Odindo, A., Six, J. (2022). A participatory assessment of nitrified urine fertilizer use in Swayimane, South Africa: Crop production potential, farmer attitudes and smallholder challenges. Frontiers in Sustainable Food Systems, 6: doi.org/10.3389/fsufs.2022.781879
- 7. Granados, P., Mireles, S., **Pereira, E.**, Cheng, C. L., & Kang, J. J. (2022). Effects of Biochar Production Methods and Biomass Types on Lead Removal from Aqueous Solution. Applied Sciences, 12(10), 5040.
- 8. Conz, R. F., **Pereira, E.**, Naico, A., Andrade, M. I., & Six, J. (2022). Identifying available resources and agricultural practices useful in soil fertility management to support orange-fleshed sweet potato cultivation on smallholder farms in Mozambique. African Journal of Agricultural Research, 18(1), 58-72.
- Gallarotti, N., Barthel, M., Verhoeven, E., Pereira, E., *et al.* (2021). In-depth analysis of N₂O fluxes in tropical forest soils of the Congo Basin combining isotope and functional gene analysis. International Society for Microbial Ecology Journal (ISME) 15 (11), 3357-3374.
- 10. Conz, R.F., Six, J., Andrade, M.I., **Pereira, E.** (2021). Soil fertility maintenance with organic amendments to orange fleshed sweetpotato. Nutrient Cycling in Agroecosystems 119: 213–229.
- Navarro, J., *Salazar, J., Kang, J. J., Parsons, J., Cheng, C. L., Castillo, A., Pereira, E. (2020). Compost and Biochar to Promote Soil Biological Activities under Sweet Potatoes Cultivation in a Subtropical Semiarid Region. Applied and Environmental Soil Science v. 2020: 7230595, 11.

- 12. *Pereira, E., Lechot, J., Conz, R. F., Cardoso, A. S., Six, J. (2019). Biochar enhances nitrous oxide reduction in acidic but not in near-neutral pH soil. Soil Systems 3:4, 69.
- Loaiza-Puerta, V., Six, J., Wittwer, R., van der Heijden, M., Pereira, E. (2019). Comparable bacterialmediated nitrogen supply and losses under organic reduced tillage and conventional intensive tillage. European Journal of Soil Biology v. 95, 103121.
- 14. Loaiza-Puerta, V., **Pereira, E.**, Huang, P., Wittwer, R., Six, J. (2019). Soil microhabitats mediate microbial response in organic reduced tillage cropping. Applied Soil Ecology 137, 39 48.
- Seitz, S., Goebes, P., Loaiza-Puerta, V., Pereira, E., Wittwer, R., Six, J., van der Heijden, M., Scholten, T. (2019). Conservation tillage and organic farming reduce soil erosion. Agronomy for Sustainable Development 39:4, 1 10.
- 16. Munda, E., Pieterse, P.J., Andrade, M. I., Makunde, G. S., **Pereira, E.** (2019). Improving productivity of orange-fleshed sweetpotato (*Ipomoea batatas*) through intercropping with legumes and moderate phosphorus application, South African Journal of Plant and Soil, 1 − 8.
- Loaiza-Puerta, V., Pereira, E., Wittwer, R., van der Heijden, M., Six, J. (2018). Improvement of soil structure through organic crop management, conservation tillage and grass-clover ley. Soil Tillage Research, v. 180, p. 1 – 9.
- Huang, P., Zhang, J., Zhu, A., Li, X., Ma, D., Xin, X., Zhang, C., Wu, S., Garland, G. and Pereira, E. (2018). Nitrate accumulation and leaching potential reduced by coupled water and nitrogen management in the Huang-Huai-Hai Plain. Science of The Total Environment, v. 610, p.1020-1028.
- 19. Verhoeven E., **Pereira E.**, Decock C., Garland G., Kennedy T., Suddick E., Horwath W., Six J. (2017) N₂O emissions from California farmlands: A review. California Agriculture, v.71, p148-159.
- 20. Pereira, E., Conz, R.F., Six, J. (2017) Nitrogen utilization and environmental losses in organic greenhouse lettuce amended with two distinct biochar materials. Science of the Total Environment, v.598, p.1169-117.
- 21. Verhoeven, E., **Pereira, E.,** Decock, C., Suddick, E., Angst, T., Six, J. (2017) Toward a better assessment of biochar-N2O mitigation potential at the field scale. Journal of Environmental Quality, v.46, p.01-10.
- 22. Huang, P., Zhang, J., Ma, D., Wen, Z., Wu, S., Garland, G., Pereira, E., Zhu, A., Xin, X., Zhang, C. (2017) Response to discussion of 'Atmospheric deposition as an important nitrogen load to a typical agro-ecosystem in the Huang-Huai-Hai Plain. 2. Seasonal and inter-annual variations and their implications (2008-2012)'. Atmospheric Environment, v.1, p.01 – 09.
- 23. Pereira, E., Suddick, E., Six, J. (2016) Carbon Abatement and Emissions Associated with the Gasification of Walnut Shells for Bioenergy and Biochar Production. Plos One, v. 11, p. e0150837.
- 24. Huang, P., Zhang, J., Ma, D., Wen, Z., Wu, S., Garland, G.M., Pereira, E., Zhu, A., Xin, X., Zhang, C. (2016) Atmospheric deposition as an important nitrogen load to a typical agro-ecosystem in the Huang-Huai-Hai Plain. 2. Seasonal and inter-annual variations and their implications (2008-2012). Atmospheric Environment, v.129, p.01 07.
- Pereira, E., Suddick, E., Mansour, I., Mukome, F., Parikh, S., Scow, K., Six, J. (2015) Biochar alters N transformations but has minimal effects on nitrous oxide emissions in an organically managed lettuce mesocosm. Biology and Fertility of Soils, p. 572-583.
- 26. Decock, C., Lee, J., Necpalova, M., **Pereira, E.**, Tendall, D., Six, J. (2015). Mitigating N2O emissions from soil: from patching leaks to transformative action. Soil. 2, 903-922.
- 27. Silva, L., Doane, T., Corrêa, R., Valverde, V., **Pereira, E.**, Horwath, W. (2015) Iron-mediated stabilization of soil C amplifies the benefits of ecological restoration in degraded lands. Ecological Applications 25: 1226-1234.
- Silva, L., Corrêa, R., Doane, T., Pereira, E., Horwath, W. (2013) Unprecedented C accumulation in mined soils: the synergistic effect of resource input and plant species invasion. Ecological Applications, 23: 1345-1356.
- 29. **Pereira, E.**, Chung, H., Scow, K., Six, J. (2013) Microbial communities and soil structure are affected by reduced precipitation, but not by elevated carbon dioxide. Soil Science Society of America Journal, 77: 482-488. ****Paper featured in Nature Climate Change as a Research Highlight*
- Plaza, C., Fernández, J., Pereira, E., Polo, A. (2012) A Comprehensive method for fractionating soil organic matter not protected and protected from decomposition by physical and chemical mechanisms. Clean Soil Air Water, 40: 134–139.
- Freitas, S.T., Pereira, E., Gomez, A.C.S., Brackmann, A; Nicoloso, F; Bisognin, D.A. (2012) Processing quality of potato tubers produced during autumn and spring and stored at different temperatures. Horticultura Brasileira, 30: 91-98, 2012. doi: 10.1590/S0102-05362012000100016

- 32. **Pereira, E.** Chung, H., Scow, K., Sadowsky, M., Van Kessel, C., Six, J. (2011) Soil N transformations under elevated atmospheric co2 and o3 during the soybean growing season. Environmental Pollution, 159: 401-407.
- 33. Bisognin, D. A., Freitas, S. T., Brackmann, A., Andriolo, J.L., Pereira, E., Muller, D. R., Bandinelli, M. G. (2008) Physiological aging of potato tubers produced during fall and spring growing seasons and stored under different temperatures, Bragantia, 67: 59-65. doi: 10.1590/S0006-87052008000100007
- 34. Pereira, E., Emanuelli, T., Bisognin, D., Freitas, S. (2008) Optimization and validation of an enzymatic method to quantify glucose in potato tubers, Ciencia Rural. V.38 (5), p. 1227-1232.

Book chapter

Pereira E.I.P., Teixeira Filho M.C.M. (2020) Detection and Quantification of Nitrifying Bacteria Using Real-Time PCR. In: Gupta K. (eds) N Metabolism in Plants. Methods in Molecular Biology, vol 2057. Humana, New York, NY. <u>https://doi.org/10.1007/978-1-4939-9790-9_13</u>

Panelist Engagements

- 2023 THRIVE Annual Summit: "The Role of Mentoring in Supporting Faculty Equity and Success".
- 2022 ¡Juntos al Éxito! "Successful Together: Community Engagement/Service Learning at UTRGV".
- 2017 Fall Public Lecture: "Tackling Malnutrition with Biofortification" at ETH Zurich.

Instructed Courses at UTRGV

- ENVR 1401 and ENVR 1402 Introduction to Environmental Sciences I and II
- ENVR 3303 Research Methods and Data Analyses
- ENVR 4320 Fundamentals of Soil Science
- ENVR 4321 Soil Ecology
- EEMS 5360 Soil Conservation
- EEMS 6100 System Sciences and Applications Seminar
- EEMS 6305 Advanced Sustainable Agriculture

Instructed Training and Workshops

- 2023 "We are Women in Ag" Workshop: Facilitated hands-on training sessions focusing on soil color and texture analysis.
- 2023 Lab exhibitor at the 63rd Annual RGV Regional Science and Engineering Fair
- 2022 IMAS Annual Biodiversity Festival: Conducted hands-on demonstrations to engage attendees in biodiversity education.
- 2022 Berta Palacios Elementary School 5th grade 70 students Soil science hands on activities part of the Texas Essential Knowledge and Skills
- 2022 "Dig It! The Secrets of Soil" Exhibition at IMAS: Designed and led interactive soil science activities, supplementing an exhibition originally created by the Smithsonian's National Museum of Natural History.
- 2019 Career Day at San Benito Elementary: Led career-centric activities and discussions, emphasizing the relevance of soil ecology and environmental sciences.
- 2019 Soil Science Workshop for PSJASD Teachers: workshop aimed at enhancing the high-school curriculum and increasing minority student recruitment in plant sciences.

Professional Service - Workforce development:

- 2018 Present: Internship liaison for UTRGV students with the USDA Natural Resources Conservation Services.
- 2023 Organized an 8-session Natural Resources Workshop for Dual Credit, STC, and UTRGV students.
- Development of a Soil Science Certificate at UTRGV, including new courses such as Soil Science and Conservation and Fundamentals of Soil Science.

Professional Service - Academia:

- 2023 Present Argonne Solar Soils Methods Review Subcommittee
- 2020 Present USDA- NIFA Federal Grant Peer Review Panelist Food, Agricultural, Natural Resources, and Human Sciences Grant Programs.
- 2023 Co-Chaired In-Depth Symposium: Microbiomes of Agriculture: Supporting Crop Production and Mitigating Environmental Impact. American Society for Microbiology (ASM) Microbiome.
- 2023 2023 USDA Office of Partnerships and Public Engagement Peer Review Panelist
- 2022 2024 Co-chair the South Region Standards Committee for the National Cooperative of Soil Survey
- 2022 2023 Guest Editor for the Journal Sustainability Special Issue: Sustainability, Climate Change, and Ecology: Challenges and Opportunities
- 2022 2022 Co-Chaired a session on Advancing Concepts and Inclusion in Geosciences Education at the South-Central Section Meeting of the Geological Society of America.
- Session moderator and poster judge: Soil Science Society of America (2019), Soil Survey & Land Resource Virtual Workshop (2022), South-Central Geological Society of America (2022).
- Reviewer for Nature Climate Change, Biogeochemistry, Biology and Fertility of Soils, Pedosphere, Plos One, Soil & Tillage Research, Soil Systems, Journal of Environmental Quality, and Mitigation and Adaptation Strategies for Global Change.

Professional Service - UTRGV:

- 2023 Present: Graduate Program Coordinator for the Agricultural, Environmental, and Sustainability Sciences program.
- 2023 2023 Chair of the scientific advisory committee for the College of Sciences Annual Research Conference
- 2021–2023 Chair of the Women in Science Network (WISE) College of Sciences
- 2022 2022 Search Committee Chair for Assistant Professor in Geomorphology
- 2021 2022 Women Faculty Network (WFN) Edinburg Member-at-large
- 2018 2022 Coordinator for the Environmental Science core curriculum assessment.
- Program Committee Member: Agriculture, Environmental, and Sustainability Sciences Graduate level.
- Program Committee Member: Environmental Science Undergraduate level.
- Program Committee Member: Sustainable Agriculture and Food Science Undergraduate level.
- Faculty Mentor: Vaquero Roundup for Environmental Science students.
- Grant Proposal Reviewer: Faculty reviewer for the Engaged Scholarship Award (ESA).
- Moderator and Judge at the College of Sciences Annual Research Conference.

Presentations at Scholarly Events since joining UTRGV

- 1. **Pereira, E**. (2023). Microbial communities as drivers of soil functioning in farmlands: Assessing spatial and temporal variability. American Society for Microbiology Microbiome. Houston, TX.
- 2. **Pereira, E**. (2023). Introducing climate smart practices to Hispanic vegetable farmers of the Rio Grande Valley, TX. Soil Survey & Land Resource Workshop (60th Annual).
- 3. **Pereira, E**. (2023). Experience as a Kika De La Garza Science Fellow. USDA Kika De La Garza Fellowship Webinar. U.S. Department of Agriculture.
- 4. **Pereira**, E., Cheng, C., & Kang, J. (2022). Progress on increasing Hispanic workforce in soil science through training, research, and education at the University of Texas Rio Grande Valley. ASA, CSSA, SSSA International Annual Meeting, Baltimore, MD.
- Rivera, A., Feria, T., & Pereira, E. (2022). Revealing the effects of climate change and fungicides on soil microbial communities in the Lower Rio Grande Valley, Texas. ASA, CSSA, SSSA International Annual Meeting, Baltimore, MD.
- De La Rosa, G., Cheng, C., Kang, J., & Pereira, E. (2022). Measuring nitrate loss in the form of leaching in different soil types and nitrogen fertilizers. ASA, CSSA, SSSA International Annual Meeting, Baltimore, MD.

- 7. Rivera, A., Feria, T., Choudhury, R., & **Pereira**, E. (2022). Revealing the effects of climate change and fungicides on soil microbial communities in the Lower Rio Grande Valley, Texas. Biennial Meeting Soil Ecology Society, Soil Ecology Society.
- 8. Pereira, E. (2022). Conservation practices for soil health and climate-smart food production. Talk presented at the Center for Water and the Environment, UT Austin, Austin, TX.
- 9. Pereira, E. (2022). Conservation practices for soil health and climate-smart food production. Department of Integrative Biology Seminar, University of South Florida.
- 10. Colunga, S., & Pereira, E. (2022). Carbon sequestration in sandy soils of arid and semi-arid climates: A review. Paper presented at the Soil Survey & Land Resource Virtual Workshop, College Station, TX.
- 11. Pereira, E. (2022). Soil aggregation and carbon distribution across a clay gradient. Soil Survey & Land Resource Virtual Workshop, College Station, TX.
- 12. Colunga, S., & Pereira, E. (2021). Carbon sequestration in sandy soils of arid and semi-arid climates: A review. COS Annual Research Conference.
- 13. Castellano, D., Dale, J., Gallegos, J., Feria, T., & Pereira, E. (2021). Measuring microbial activity of sweet potato crop in the Lower Rio Grande Valley. COS Annual Research Conference.
- 14. Jaramillo, I., Salinas, A., Cheng, C.-L., Kang, J., & Pereira, E. (2021). Implementing organic fertilization practices and magnetic water to improve Aloe Vera growth and soil health in the Rio Grande Valley. COS Annual Research Conference.
- 15. de la Rosa, G., Cheng, C.-L., Kang, J., & Pereira, E. (2021). Measuring nitrate loss in the form of leaching in different soil types and nitrogen fertilizers. COS Annual Research Conference.
- 16. Rivera, A., Feria, T., Choudhury, R., & Pereira, E. (2021). Revealing the effects of climate change and fungicides on soil microbial communities in the Lower Rio Grande Valley, Texas. COS Annual Research Conference.
- 17. Pereira, E., Elliott, L., & Cheng, C.-L. (2020). Soil aggregation and carbon distribution across a clay gradient. ASA, CSSA and SSSA International Annual Meetings, ASA, CSSA and SSSA.
- Soto Boni, T., Sena, K., Maltoni, K., & Pereira, E. (2020). Soil microbial activity and chemical attributes during restoration of a tropical savanna ecoregion by organic amendments. ASA, CSSA and SSSA International Annual Meetings, ASA, CSSA and SSSA.
- 19. Jaramillo, I., Dale, J., & Pereira, E. (2020). Developing sustainable sweet potato for South Texas: An opportunity to diversify agricultural production and promote soil health. 74th ANNUAL MEETING of the Subtropical Agriculture and Environments Society.
- 20. Jaramillo, I., Dale, J., & Pereira, E. (2019). Developing sustainable sweet potato for South Texas: An opportunity to diversify agricultural production and promote soil health. ASA, CSSA and SSSA International Annual Meetings, San Antonio, TX.
- 21. Yvette Garcia, Jorge Da Silva and Engil Pereira. "Improving Crop Energy Balance through Associations with N 2-Fixing and N 2 o-Reducing Bacteria". ASA, CSSA and SSSA International Annual Meetings, San Antonio. (November 2019)
- 22. Engil Pereira, Jihoon Kang and Chu-Lin Cheng. "Progress on Increasing Hispanic Workforce in Soil Science through Training, Research, and Education: A New Integrated Program at South Texas/Rio Grande Valley". ASA, CSSA and SSSA International Annual Meetings, San Antonio. (November 2019)
- 23. Denise Tijerina and **Engil Pereira**. "Tracing Spatial Soil Heterogeneity to Elucidate Microbiome Composition". ASA, CSSA and SSSA International Annual Meetings, San Antonio. (November 2019)
- 24. Aaron Garza, Michael Gonzalez, Adam Flores, **Engil Pereira** and James Kang. "Effects of Inoculated Biochar on the growth of Cucumber". 2019 ASA-CSSA-SSSA International Annual Meeting, San Antonio. (November 2019)
- 25. Michael Gonzalez, Adam Flores, Aaron Garza, Citlali Zertuche, Engil Pereira and James JiHoon Kang."Soil biological health affected by compost and tillage in a postconstruction land hydroseeded with turfgrass".2019 ASA-CSSA-SSSA International Annual Meeting, San Antonio, Texas. (November2019)
- 26. Andrew Corder, Christopher Gabler and Jude Benavides and **Engil Pereira**."Viability of wetland crops for use in treatment wetlands: nitrogen removal from water and production of food".UTRGV Graduate Student Research Showcase, UTRGV Graduate College, Edinburg, TX. (November 7, 2019)
- 27. Lilly Elliott and **Engil Pereira**. "Use of Spatial Interpolation In Predicting Nutrient Availability In Agricultural Fields. ".Geographic Information Systems (GIS) Day, UTRGV, Edinburg. (October2019)

- 28. Engil Pereira."Soil health in the Rio Grande Valley South Texas". Women in Agriculture Workshop, San Isidro, TX. (June 25, 2019)
- Steffen Seitz, Philipp Goebes, Viviana Loaiza Puerta, Engil Pereira, Raphael Wittwer, Johan Six and Marcel van der Heijden and Thomas Scholten."Conservation tillage decreases soil erosion in organic farming". European Geophysical Union General Assembly 2019, European Geophysical Union General, Vienna, Austria. (April2019)
- 30. Andrew Corder, Christopher Gabler, Jude Benavides and Engil Pereira."Viability of wetland crops for use in treatment wetlands: nitrogen removal from water and production of food".UTRGV Graduate Student Research Showcase, UTRGV Graduate College, Edinburg, TX. (April 29, 2019)
- 31. Lilly Elliott, Bradley Christoffersen and **Engil Pereira**."Following the chronosequence of C sequestration in sites converting from agricultural use to reforested land".COS Annual Research Conference, (March 28, 2019)
- 32. Engil Pereira."Soil Heterogeneity Shapes Microenvironments and Microbial Habitats".COS Annual Research Conference, (March 28, 2019)
- 33. Lilly Elliot, Bradley Christoffersen and **Engil Pereira**."Following the chronosequence of C sequestration in sites converting from agricultural use to reforested land".14th Annual Conference of the American Association of Hispanics in Higher Education, AAHHE, Costa Mesa-CA. (February2019)
- 34. **Engil Pereira**. TRESS 14th Annual Conference of the American Association of Hispanics in Higher Education, AAHHE, Costa Mesa-CA. (February2019)
- 35. Engil Pereira. "Soil biological activity and nutrient release in organic sweet potato farming".73rd ANNUAL MEETING of the Subtropical Agriculture and Environments Society, Subtropical Agriculture and Environments Society, (February 8, 2019)
- 36. Rafaela Feola Conz, Engil Pereira and Johan Six."Can Organic Management Support Food Productivity While Preventing Soil Nutrient Depletion in Rural Mozambique?".SSSA International Soils Meeting, Soil Science Society of America, San Diego, CA. (January 07, 2019)
- 37. Engil Pereira, James Kang, Chu-Lin Cheng, Mirayda Torres, Bradley Christoffersen, Christopher Gabler, Kristine Lowe, Alexis Racelis."Increasing Hispanic Workforce in Soil Science through Training, Research, and Education: A New Integrated Program for the Rio Grande Valley in South Texas".SSSA International Soils Meeting, Soil Science Society of America, San Diego, California. (January 7, 2019)
- 38. Jahdiel Salazar, Josabeth Navarro, James Kang and Engil Pereira."Sweet potato: a potentially profitable summer crop for South Texas organic farmers to enhance soil biological activity and nutrient release". SSSA International Soils Meeting, Soil Science Society of America, San Diego, CA. (January 7, 2019)
- 39. Josabeth Navarro, Jahdiel Salazar, James Kang and Engil Pereira."Sweet Summer Spud: South Texas soil fertility management strategies with organic amendments to increase nutrient availability and reduce nutrient depletion ".SSSA International Soils Meeting, Soil Science Society of America, San Diego, CA. (January 7, 2019)
- 40. ChuLin Cheng, Juan Luis Gonzalez, James JiHoon Kang, Carlos Cintra, Jude Benavides, Elizabeth Heise, Ja mes Hinthorne and **Engil Pereira**. "Increasing Workforce Diversity through "Stimulating Hispanic Participation in the Geosciences" (SHIP-GEO) Program at Rio Grande Valley/South Texas". The Geological Society of America Annual Meeting, Geological Society of America (GSA), Indianapolis, IN. (Nov 5, 2018)
- 41. Rafaela Conz, **Engil Pereira**, Andrade Maria Isabel and Six Johan."Towards Nutritional Security through Agroecological Practices in Orange-fleshed Sweetpotato Systems in Mozambique". Annual interdisciplinary conference on research in tropical and subtropical agriculture, natural resource management and rural development (TROPENTAG), Ghent, Belgium. (September, 2018)
- 42. Eliah Munda, Maria Andrade, Goodwill Makunde, Pieterse PJ, Johan Six and **Engil Pereira**. "Improving Sweetpotato Production through Sweetpotato-Legume Intercropping and Use of Phosphorus Fertilisers in Mozambique". Tropical and subtropical agriculture, natural resource management and rural development (TROPENTAG), Ghent, Belgium. (September, 2018)
- 43. Amado Zambrano, Paola Granados, Aaron Garza, Sergio Mireles, Jong Min Kim, **Engil Pereira** and James JiHoon Kang. "Aqueous lead removal using biochar pyrolyzed with locally-sourced biomass".20th LRGV Annual Water Quality Management & Planning Conference, LRGV Stormwater Taskforce/UTRGV, South Padre Island. (May, 2018)

- 44. Rafaela Conz, **Engil Pereira**, Andrade Maria Isabel and Six Johan. "Organic management of soil fertility for sustainable sweetpotato production". European Geophysical Union General Assembly 2018, European Geophysical Union General, Vienna, Austria. (April, 2018)
- 45. Lilly Elliot, James JiHoon Kang and **Engil Pereira**. "Development of a field trial to promote improvements in soil conditions for crop production". UTRGV College of Sciences Annual Research Conference, UTRGV College of Sciences, Edinburg. (April, 2018)
- 46. Amado Zambrano, Paola Granados, Aaron Garza, Sergio Mireles, Jong Min Kim, **Engil Pereira** and James Kang. "Evaluation of locally-sourced biomass for biochar as filter media".4th Annual Food Security Forum, UTRGV Earth Fest 2018, Edinburg. (April, 2018)
- 47. Paola Granados, Aaron Garza, Amado Zambrano, Sergio Mireles, Jong Min Kim, **Engil Pereira** and James JiHoon Kang. "Evaluation of locally-sourced biomass for biochar as filter media". UTRGV College of Sciences Annual Research Conference, UTRGV College of Sciences, Edinburg. (April, 2018)