

2023 Soil Survey & Land Resource Workshop



60th Annual
February 8-9, 2023
Best Western Premier, Bryan



Wednesday, February 8, 2023

Session I: Cooperative Updates

Moderator: Jake Mowrer

8:15 am	Introductions	Alan Stahnke, <i>USDA NRCS</i>
8:30 am	Welcome and Comments	Kristy Oates, <i>Texas State Conservationist, USDA NRCS</i>
8:45 am	Highlights of the National Cooperative Soil Survey in Texas	Jo Parsley, <i>Soil Survey Regional Director, South Central Region, USDA NRCS</i> David Lindbo, <i>Director, Soil and Plant Science Division, USDA NRCS</i> Julie Howe, <i>Professor, Texas A&M AgriLife Research</i> Jake Mowrer, <i>State Soil Extension Specialist, Texas A&M AgriLife Extension</i> Alan Stahnke, <i>State Soil Scientist, USDA NRCS</i>
10:15 am	What's New at the Center and the Kellog Lab	David Hoover, <i>Director National Soil Survey Center</i> , Jennifer Ingham and Crystal Schaecher (Lab Analysts) <i>USDA NRCS</i>

10:30 m BREAK and POSTERS*

11:00 am	PSSAT Update	Cole Patton, <i>Incoming President, Professional Soil Scientist of Texas</i>
11:15 am	Texas Board of Professional Geoscientists Update	Brycen Arnold, <i>Compliance Investigator, Texas Board of Professional Geoscientists</i>
11:30 am	Soil Health Institute Update	Cristine Morgan, <i>Chief Scientific Officer, Soil Health Institute</i>

11:45 pm LUNCH

Session II: Student Presentations

Moderator: Tyson Hart

1:00 pm	Nitrogenous Compounds Adapt to Drought in the Root Exudate Metabolome	Harrison Coker, <i>Texas A&M University</i>
1:15 pm	Soil Microbiomes and Drought Resistance of Soils Under Long-Term Conservation Management.	Marina Vilela, <i>Texas Tech University</i>
1:30 pm	Influence of Legume Inclusion on Greenhouse Gas Emissions from Pasture Systems in the Southern High Plains of Texas	Raavi Arora, <i>Texas Tech University</i>
1:45 pm	Forageable Cover Crops Influence Soil Health	Isaiah Robertson, <i>Texas A&M University</i>
2:00 pm	Identifying Barriers to Adoption of Cover Crops in the Southern Great Plains of Texas and Oklahoma	Stephanie deVilleneuve, <i>Texas A&M University</i>
2:15 pm	Vertisols: A Cracked Foundation	Kate Watson, <i>Texas A&M University</i>

- 2:30 pm Effects of Carbonate on Sodium Aluminosilicates Formation and Sodium-potassium Exchange Chiawei Lin, Texas A&M University
- 2:45 pm End of session questions for student presenters

Session III: Early Career Panel

Moderator: Kelly Attebury

- 3:00 pm Come work for USDA NRCS. Overview on USAJobs Alan Stahnke, *State Soil Scientist, USDA NRCS*
- 3:15 pm NRCS Careers – Ecological Site Specialist Monica Polgar, *Ecological Site Specialist, USDA NRCS*

3:30 pm POSTER SESSION*

(Poster authors should be present to discuss virtually)

6:00 pm Dinner and Awards Announcement

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***Poster Session (at Hotel)**

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| 1 | Dynamic Properties and Soil Health Indicators of Irrigated vs. Non-Irrigated Cropland on Loamy Terraces in the Southern High Plains | Yanuel A. Charriez Rosado, USDA-NRCS |
| 2 | Soil Systems a Framework for Refinement | Alexander Stum, Roel Guerra, USDA-NRCS, Erin Hourihan, Soil Health Institute |
| 3 | Compilation of Soil System Groupings in the Southern High Plains | Steven McGowen, USDA-NRCS |
| 4 | MLRA 118A - Dynamic Soil Properties for Arkansas River Valley Forest to Silvopasture Transition DSP | Larry Gray, USDA-NRCS |
| 5 | Analysis of Dynamic Soil Properties of the South Canadian River Valley in Oklahoma | Tyson Morley, Tyler Kempf, USDA-NRCS |
| 6 | MLRA 131B - Dynamic Soil Properties of the Rilla Series | Meg Rinaudo, USDA-NRCS |

Student Posters

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| 1 | Measuring Soil Moisture | Seyedali Azizi, Texas A&M University |
| 2 | Determining the Suitability of Recycled Urban Waste in Stormwater Management Design | Dallas M. Williams, Texas A&M University |
| 3 | Long-term Effects of Agriculture Intensification on Mineral Weathering | Deepa Khadka, Texas A&M University |
| 4 | Deep Shifts in Soil Enzyme Activities Due to Forest Degradation | Alejandro Atenas, Texas A&M University |
| 5 | Could Remote Sensing Soil Moisture Data Improve Seasonal Streamflow Forecast Accuracy? | Mingxiu Wang, Texas A&M University |
| 6 | Potential Control of <i>Sclerotinia sclerotiorum</i> under Wheat Crop Rotation Containing <i>Trichoderma</i> Sp. Endophyte | Amanda Faria, Texas Tech University |
| 7 | Characterization of Soil Physical and Hydraulic Properties of Texmesonet Monitoring Sites | Bismark Osei, Texas A&M University |
| 8 | Does Land Use Change Alter Soil Carbon in the Tropics? | Lydia Salsbury, Texas A&M University |

Thursday, February 9, 2023

Session IV: Applications of Soil Survey

Moderator: Felipe Aburto

- 8:15 am Conservation Implementation in N Central Texas (Birdwell Clark Ranch) John Sackett, *USDA NRCS*
- 8:30 am Sampling Urban Soils for Baseline Carbon in San Antonio (working title) Travis Waiser, *USDA NRCS*

8:45 am	Applications of Soil Health Practices	Dennis Brezina, <i>USDA NRCS</i>
9:00 am	Update from the Central National Technology Center	Richard Reid, <i>USDA NRCS</i>
9:15 am	Soil Business Systems	Drew Kinney, <i>USDA NRCS</i>
9:30 am	Mid-Infrared (MIR) Spectroscopy Technology Deployment for Soil Survey Projects in the South-Central Region	Beyhan Amichev, <i>USDA NRCS</i>

9:45 am BREAK

Session V: Climate-Smart Projects in Texas

Moderator: Larry Gray

10:15 am	Texas Climate-Smart Initiative	Julie Howe, Professor, <i>Texas A&M AgriLife Research</i>
10:30am	Carbon Markets (Virtual)	Jim Blackburn, <i>BCarbon</i>
10:45am	Climate-Smart Planning Process for Texas Climate-Smart Initiative	John Foster, <i>Texas State Soil and Water Conservation Board</i>
11:00 am	Continuous GHG emission measurements: Why it is needed?	Nithya Rajan, <i>Texas A&M AgriLife Research</i>
11:15 am	Carbon Across Texas	Katie Lewis, <i>Texas A&M AgriLife Research</i>
11:30 am	Introducing Climate Smart Practices to Hispanic Vegetable Farmers of the Rio Grande Valley, TX (Virtual)	Engil Pereira, <i>University of Texas-Rio Grande Valley</i>

11:45 am LUNCH

Session VI: Soil Systems and Cycles

Moderator: Brian Christianson

1:00 pm	Prairie Potholes and Canebrakes at Brazos Bend	Charles Pehl, <i>Pehl Environmental Consulting</i>
1:15 pm	Organic Carbon Forms in Soil Following Thermal Treatment for Oil Impacts	Jake Mowrer, <i>Texas A&M AgriLife Extension</i>
1:30 pm	Soil and Clay Mineralogy in Environmental, Agronomic, and Toxicological Applications	Youjun Deng, <i>Texas A&M AgriLife Research</i>
1:45 pm	Untangling Preferential Flow Patterns using Soil Moisture Measurements	Briana Wyatt, <i>Texas A&M AgriLife Research</i>
2:00 pm	BREAK	
2:15 pm	Soil Taxonomy and the Philosophy of John Stuart Mill	Curtis Monger, <i>New Mexico State University</i>
2:30 pm	Molecular Tradeoffs in Soil Organic Matter at Continental Scale	William Hockaday, <i>Baylor University</i>
2:45 pm	Soil Carbon Dynamics Updates	Peyton Smith, <i>Texas A&M AgriLife Research</i>
3:00 pm	Anthropogenic degradation and functional recovery of forest-soil systems	Felipe Aburto, <i>Texas A&M AgriLife Research</i>
3:15 pm	Developing strategies for nitrogen and phosphorus circular economies: An overview of CASFER at TTU and beyond	Lindsey Slaughter and Matt Siebecker, <i>Texas Tech University</i>
3:30 pm	Closing Remarks	Julie Howe, <i>Texas A&M AgriLife Research</i>
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