

# 2021 Soil Survey & Land Resource Workshop



58<sup>th</sup> Annual  
February 4-5, 2021  
Online



Thursday, February 4, 2021

8:00 am

Check-in and Technical Issue Troubleshooting

## Session I: Cooperative Updates

Moderator: Jake Mowrer

9:00 am	Introductions	Alan Stahnke
9:15 am	Welcome and Comments	Dr. David Baltensperger <i>Soil and Crop Sciences Department Head</i>
9:30 am	Highlights of the National Cooperative Soil Survey in Texas	Alan Stahnke <i>State Soil Scientist, USDA NRCS</i> Jo Parsley <i>Regional Director, South-Central Region, USDA NRCS</i> David Lindbo <i>Director Soil and Plant Science Division, USDA NRCS</i>
10:00 am	Highlights: Texas A&M AgriLife Research & Extension	Jake Mowrer <i>State Soil Extension Specialist, Texas A&amp;M AgriLife Extension</i> Julie Howe <i>Associate Professor, Texas A&amp;M AgriLife Research</i>
10:15 am	What's New at the Center	David Hoover <i>Director National Soil Survey Center, USDA NRCS</i>
10:30 am	<b>BREAK</b>	
10:45 am	2020 Collaborations	Skye Wills <i>National Leader, Soil Science Research, USDA NRCS</i>
11:00 am	Kellogg Lab Update	Deb Harms <i>National Leader Kellogg Lab, USDA NRCS</i>
11:15 am	PSSAT Update	Laurie Kiniry <i>President, Professional Soil Scientist of Texas</i>
11:30 am	Texas Board of Professional Geoscientists Update	Becky Johnson <i>Chair, Texas Board of Professional Geoscientists</i>
11:45 am	Soil Health Institute Update	Cristine Morgan <i>Chief Scientific Officer, Soil Health Institute</i>
12:00 pm	<b>LUNCH BREAK</b>	

## Session II: The Future of Digital Mapping

Moderator: Julie Howe

1:00 pm	A Digital Soil Survey mapping Approach to a Coastal Zone Soil Survey of West Galveston Bay	Kenny Hall, Stacey Kloesel, & Jon Weidenfeld <i>South-Central Region, USDA NRCS</i>	Rosenberg, TX MLRA Office,
1:30 pm	Using R Studio for Enhanced Digital Soil Mapping	Sara Russell & Tyson Hart <i>Nacogdoches &amp; Bryan, TX MLRA Office, South-Central Region, USDA NRCS</i>	
1:45 pm	Using DSM Methods Initial Soil Survey – Altus Air Force Base	Tyson Morley & Tyler Kempf <i>Altus, OK MLRA Office, South-Central Region, USDA NRCS</i>	
2:00 pm	Map My Property App	Brad Barber <i>Texas A&amp;M AgriLife Forest Service</i>	
2:15 pm	Soil Compaction	Haly Neely <i>Washington State Univ.</i>	
2:30 pm	<b>BREAK</b>		

**Session III: Dynamic Soil Properties****Moderator: Julie Howe**

2:45 pm	Measuring Soil Carbon within San Antonio City Limits	Travis Waiser & Ashley Anderson, <i>Kerrville, TX, MLRA Office, South-Central Region, USDA NRCS</i>
3:00 pm	Dynamic Soil Survey in Oklahoma	Chance Robinson & Jeremy Dennis, <i>Stephenville, TX, &amp; Stillwater, OK MLRA Office, South-Central Region, USDA NRCS</i>
3:15 pm	2020 Collaboration Project NRCS/UTRVG	Alexis Racellis, <i>Univ. of Texas Lower Rio Grande Valley</i>
3:30 pm	Connecting the Dots: Dynamic Soil Properties and Ecological Sites	Colin Walden & Erin Hourihan, <i>Stephenville, TX, &amp; Stillwater, OK MLRA Office, South-Central Region, USDA NRCS</i>
3:45 pm	Update on Soil Health in Texas	Dennis Brezina <i>USDA NRCS Texas</i>
4:00 pm	Final Comments and Adjourn	

**Friday, February 5, 2021****Session IV: Student Presentations****Moderator: Peyton Smith**

9:00 am	Brief Welcome - Day 2	Julie Howe
9:05 am	Does Long-term Nitrogen Fertilization Affect Soil Organic Carbon?	Annalee Epps <i>Texas A&amp;M Univ.</i>
9:20 am	Soil Active Carbon is Affected by Organic Amendment, Tillage, and Cover Cropping	Binita Thapa <i>Texas A&amp;M Univ.</i>
9:35 am	Carbon Stocks of Sandy and Clay Loam Soils in West Texas Cropping Systems	Joseph Burke <i>Texas A&amp;M Univ.</i>
9:50 am	The Effect of Tillage and Cover Crops on Aggregate Stability	Grace Bodine <i>Texas A&amp;M Univ.</i>
10:05 am	Changes in Dynamic Soil Properties across a Conservation Tillage Chrono-Sequence in the Lower Rio Grande Valley	Luzyannet Ballesteros Gonzalez <i>Univ. of Texas Lower Rio Grande Valley</i>
10:20 am	Soil Microbial Response to Long-Term Management Practices in Cotton Systems of the Texas Southern High Plains	Billi Jean Petermann <i>Texas Tech Univ.</i>
10:35 am		<b>BREAK</b>
10:45 am	Role of Tillage on Soil C Dynamics	Nicole Shigley <i>Texas A&amp;M Univ.</i>
11:00 am	Uncovering the Molecular Composition of Soil Organic Matter in Tropical Soils with Different Land Uses	Katherine Quinonez <i>Texas A&amp;M Univ.</i>
11:15 am	Land Geomorphology and Soil Salinity of Lajas Valley SW Puerto Rico	Jose Pablo Castro Chacon <i>Univ. of Puerto Rico - Mayaguez</i>
11:30 am	Revisiting Potassium Chemistry in Soils via Combined Extractions and Synchrotron Techniques	Emma Schmidt <i>Texas Tech Univ.</i>
11:45 am	The Response of Microbial Communities to the Combination of Drought and Fire in a Semi-Arid Savanna	Matthew Peterson <i>Texas A&amp;M Univ.</i>
12:00 pm	Maximizing Utility of the VisNIR-Mounted Penetrometer	Sarah Hetrick <i>Texas A&amp;M Univ.</i>
12:15 pm		<b>LUNCH BREAK</b>

**Session V: Professional Presentation****Moderator: Jake Mowrer**

1:30 pm	Economics of Soil Health	Cristine Morgan	<i>Soil Health Institute</i>
1:45 pm	Re-thinking Pool-based Models for Soil Carbon Dynamics	Peyton Smith	<i>Texas A&amp;M AgriLife Research</i>
2:00 pm	Comparing Soil Health Measurement Approaches	Ayush Gyawali	<i>Texas A&amp;M AgriLife Research</i>
2:15 pm	Prairie Potholes on the Texas Coastal Plain	Charles Pehl	<i>Pehl Environmental</i>
2:30 pm	Biological Drilling to Mitigate Compaction on a Ft Hood Artillery Range	Jake Mowrer	<i>Texas A&amp;M AgriLife Extension</i>
2:45 pm	<b>BREAK</b>		
3:00 pm	Announcement: Student Awards		
3:15 pm	Building a Soil Water Research Program in Texas	Briana Wyatt	<i>Texas A&amp;M AgriLife Research</i>
3:30 pm	Soil Health Indicators	Julie Howe	<i>Texas A&amp;M AgriLife Research</i>
3:45 pm	Stakeholder Involvement in Conservation	Evgenia Spears	<i>Texas A&amp;M AgriLife Research</i>
4:00 pm	Closing Statements and Adjourn	Jake Mowrer	