

# Utah Soil Health Network; On-Farm Soil Health Demonstration Trail Project

**Total Project Cost:** \$3,269,087

**Federal Funds Awarded:** \$1,710,288

**State Funds Awarded:** \$500,000

**Matching Funds Committed:** \$1,058,799

**Project Duration:** 5 years

**Description:** Utilizing 16 on farm demonstration sites to collect agronomic, economic, environmental and social impacts of implementing soil health practices. Sites will be used to host farm field days and workshops to perform outreach and education activities. Data collected will be used to better understand if and what soil health practices work in different farming systems and climates across Utah. Each site will have roughly 50 acres that will have a system of soil health practice implemented based on the farmer / ranchers goals and objectives along with the resource concerns identified. A soil health plan will be developed for each site, with a planner, extension agent and crop advisor will be assigned to the site to provide technical assistance during the entire project.

## Counties with demonstration sites:

Duchesne	Weber	Millard
Wasatch	Salt Lake	Piute
Rich	Cache	Seiver
Box Elder	Garfield	Sanpete
Juab	San Juan	
Tooele	Iron	

## Cropping Systems Represented:

- Pasture /Grass Hay, Forage / Rangeland
- Alfalfa, Pasture /Grass Hay
- Small Grains (Wheat, Barley, etc), Safflower, Pasture /Grass Hay, Russian Wild Rye for Seed
- Small Grains (Wheat, Barley, etc), Alfalfa, Pasture /Grass Hay, Forage / Rangeland
- Alfalfa, Forage / Rangeland
- Fruits / Vegetables / Specialty Crops
- Small Grains (Wheat, Barley, etc), Grain Corn, Alfalfa, Pasture /Grass Hay
- Alfalfa, Pasture /Grass Hay, Forage / Rangeland
- Small Grains (Wheat, Barley, etc), Pasture /Grass Hay, Forage / Rangeland
- Fruits / Vegetables / Specialty Crops
- Small Grains (Wheat, Barley, etc), Alfalfa

**Project Team:**

Key Statewide Experts	Roles and Responsibilities
<p><b>Dr. Matt Yost</b> is an Agroclimate Extension Specialist at Utah State University. He has conducted over 150 on-farm trials in 7 states during the last 12 years. He has published and presented several research and extension articles on soil health and is currently on the science advisory board of the Soil Health Partnership. Dr. Yost will assist with all five objectives.</p>	<ul style="list-style-type: none"> <li>● Co-lead establishment and maintenance of on-farm trials.</li> <li>● Lead data collection and analysis (soil sampling, crop yields, etc.) efforts of on-farm trials.</li> <li>● Lead Extension outreach efforts and communication of results to farmers through the state.</li> <li>● Assist Utah Soil Health Partnership in education and outreach efforts.</li> </ul>
<p><b>Dr. Earl Creech</b> is an Agronomy Extension Specialist at Utah State University. In his research and Extension efforts, he works to address critical agronomic issues facing farmers and ranchers in Utah and throughout the western U.S. Most of his work is conducted on-farm and in cooperation with growers.</p>	<ul style="list-style-type: none"> <li>● Assist in the development of demonstration sites.</li> <li>● Evaluation of Plans of on-farm trials.</li> </ul>
<p><b>Dr. Jessica Schad</b> is an associate professor of natural resource social science at Utah State University. Dr. Schad has been using in-depth interview and survey methods over the past six years to help understand and promote the adoption of soil and water conservation practices among a variety of types of agricultural producers and diverse landscapes. Dr. Schad will lead objective 1.</p>	<ul style="list-style-type: none"> <li>● Identification of barriers to adoption of soil health practices in Utah.</li> <li>● Assess whether cost share programs are necessary for adoption, and why previous program participants stopped participating in cost share programs</li> <li>● Determine what types of support are needed to enhance adoption</li> </ul>
<p><b>Dr. Rhonda Miller</b> is the Agricultural Environmental Quality Extension Specialist at Utah State University. Dr. Miller has an agronomy background. Her research and Extension efforts focus on nutrient cycling, waste management, and protecting water and air quality.</p>	<ul style="list-style-type: none"> <li>● Oversee water quality assessment component</li> <li>● Assess impact of cover crops on nutrient loss due to nitrogen and phosphorus leaching</li> </ul>
<p><b>Dr. Ryan Larsen</b> is the Farm Management Extension Specialist at Utah State University. His research and Extension efforts focus on the economics of technology adoption, financial risk, farm and ranch profitability, and financial</p>	<ul style="list-style-type: none"> <li>● Oversee the economic evaluation</li> <li>● Perform economic assessments of soil health adoption and on farm budgets.</li> </ul>

<p>benchmarking. Dr. Larsen will lead the economic evaluation component in Objective 5..</p>	<ul style="list-style-type: none"> <li>• Develop economic tools that enhance the ability of advisors and growers to evaluate adoption of soil health practices.</li> </ul>
<p><b>Dr. Bir Thapa</b> is the State Soil Scientist for USDA - NRCS Utah and has a wealth of soil health experience working in US, Nepal, Philippines, Liberia, and Congo. He has degrees in Soil Science. His research focused on development of methods to reduce the rate of tillage induced soil movement and soil losses from steep agricultural land. He has written 20 Soils and Agriculture related textbooks for Cuttington University, Liberia and Tribhuwan University, Nepal. Also, he has published several scientific papers in internationally reviewed Journals.</p>	<ul style="list-style-type: none"> <li>• Serves as the link between NRCS and the Utah Soil Health Partnership.</li> <li>• Assists in review of the soil health evaluation methods and results.</li> </ul>
<p><b>Tony Richards</b> is a Resource Coordinator with the Utah Department of Agriculture and Food. He has over 10 years of experience with On-farm research in soil health and conservation agriculture implementing soil health practices in multiple states. Additionally he has coordinated the efforts of the statewide soil health workshops and is a founding member of the Utah Soil Health Partnership. He also practices soil health principles on his family farm in Utah.</p>	<ul style="list-style-type: none"> <li>• Coordinating Annual Soil Health Workshops and Staff Trainings.</li> <li>• Coordinating efforts of the Soil Health Partnership efforts in the <i>Utah Soil health Network Project</i>.</li> <li>• Assist in Identifying Farmers to participate in the On-Farm demonstration trials.</li> <li>• Assisting in the outreach efforts and communication of results to farmers through the state.</li> </ul>
<p><b>Paul Burnett</b> has been the Nonpoint Source Program Coordinator at the Division of Water Quality for 10 years. Jim oversees the Nonpoint Source Pollution Grant Program that awards \$2,000,000 annually to producers. and other agency partners, to help reduce nonpoint source pollution throughout the State of Utah. His roles and responsibilities also include: developing and cultivating partnerships with other agencies around the state, developing management plans focused on reducing pollution from various sources, and reporting on the state's abilities to accomplish the milestones identified in these plans. Previously, Jim also worked as an agriculture extension agent at Utah State University implementing water quality projects as a certified nutrient management planner.</p>	<ul style="list-style-type: none"> <li>• Serve as the Non-Point Source Water Quality expert on the Utah Soil Health Partnership.</li> <li>• Review plans and results from the Water Quality evaluations.</li> <li>• Assist in Outreach programs to implement soil health practices on AFO/CAFO and agriculture concerns related to water quality.</li> </ul>

<p><b>Marion Murray</b> is the IPM Project Leader for USU Extension, and the Western SARE Professional Development Coordinator for Utah. She has conducted outreach in pest management and soilborne diseases to Utah specialty crop producers for the past 13 years. She has also conducted several on-farm research trials to improve pest management practices.</p>	<ul style="list-style-type: none"> <li>• Serve as the link between Utah Soil Health Partnership and WSARE</li> <li>• Assist in the outreach, training and education effort of the Utah Soil Health Partnership Efforts for growers and field advisors</li> </ul>
<p><b>Rick Kent</b> Lead Crop Advisor, crop advisor with extensive experience in Utah agriculture and working with diverse farming systems.</p>	<ul style="list-style-type: none"> <li>• Serve as the link to the Agriculture Industry for the Soil Health Partnership.</li> <li>• Review On-farm plans for agronomic viability and realistic implementation.</li> </ul>