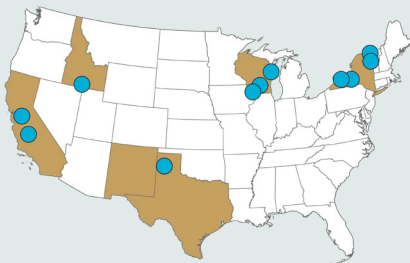


DAIRY SOIL & WATER REGENERATION

Building soil health to reduce greenhouse gases, improve water quality, and enable new economic benefits

OVERVIEW

We are collecting data from dairy-producing regions across the U.S. to calibrate commonly used models.



- Research Experiments
- Participating Dairy Farms

Measurements Investigated

- CO₂, CH₄, & N₂O emissions
- Soil health & carbon stocks
- Water quality & quantity
- Soil moisture dynamics
- Yield
- Forage quality



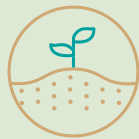
Saturated hydraulic conductivity (shown above) is a measurement of how quickly water enters the soil and is a component of soil moisture dynamics.

PROJECT OUTCOMES

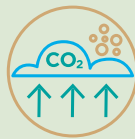
- 1 Soil Sampling to Provide a Scientific Baseline for Soil Carbon Sequestration and Soil Health
- 2 Field Research to Measure Environmental Benefits of Field Manure Use and Soil Health Practices
- 3 Share Results Broadly to Support Revenue-Generating Projects and Markets

MODELING IMPROVEMENTS IN FEED PRODUCTION MANAGEMENT

We are investigating tillage practices, cover cropping, and manure products to identify ways that management choices affect:



Soil Health



Greenhouse Gas Emissions



Soil Carbon Stocks



Water Quality & Water Use Efficiency



Side-by-side dairy feed fields managed with full-width tillage, no cover crops, and liquid dairy manure (left side) in contrast to strip-tillage, cover crops, and a new manure product (right side).

INFORMING DECISIONS ACROSS THE DAIRY INDUSTRY

- Enable dairy farmers to manage for greater profitability and resiliency
- Assist industry professionals in prioritizing investments
- Support ag service providers in making management recommendations to farmers
- Promote policies that encourage soil health management on U.S. dairy feed operations