

Natural Resources Conservation Service

# Soil and Plant Science Division

South Central Region



## Kerrville MLRA Soil Survey Office

## SATURO Infiltrometer\* Collects and Analyzes Data in the Field

### Purpose

Earlier this year, the South Central Region purchased 21 SATURO Infiltrometers, seven MLRA offices received three infiltrometers that can be used individually, or as a set, and will be shared between MLRA offices. The infiltrometers are designed to collect and analyze data in the field, saving time when used for MLRA update projects, dynamic soil properties projects, and during soils demonstrations.

### Background

The SATURO is a dual-head infiltrometer that can do almost everything, including field measurements and converting the data into hydraulic conductivity and infiltration rates. Each infiltrometer and all its components are packed in a wheeled, ruggedized case that can be taken into any field condition, making set up quick and user friendly. The Kerrville Office is housing one set of the infiltrometer equipment which consists of three infiltrometers that can take multiple readings on-site at the same time. Regional staff attended a training session conducted by two employees that helped design the infiltrometer. The trainers provided not only hands-on demonstrations, but they were able to answer real-situation questions as well. With a short, hands-on training session, the infiltrometer equipment can also be used by local field offices with supervision from the soil survey staff.



SATURO Infiltrometer site set-up.





## Key Outcomes

Currently, the Kerrville Soil Survey Office is assisting the Roam Ranch in tracking their improvement of soil health. The Roam Ranch is involved in multiple soil health and holistic management-related projects with guidance from General Mills, the Savory Institute, and the National Center for Appropriate Technology (NCAT). Although several samples have been taken for multiple soil properties and soil health indicators, previous results of infiltration rates were only estimates. With these infiltrometers, the staff has been onsite, taking actual readings and downloading the results in real-time, in the specific fields that the Roam Ranch are working to improve. With accurate, on-time delivery, the staff and Ranch managers can see how the soil health practices are affecting the infiltration rates of the soil over time.



**Ashley Anderson, soil scientist, sets up the SATURO Infiltrator to take the first field readings at the Roam Ranch.**

## Future Goals

Other ranches in the area are doing similar soil health practices, and with increased interest in the new technology, the Kerrville staff anticipate using the SATURO Infiltrators to establish baseline data for many fields in the area. The Kerrville Soil Survey Office staff envisions the SATURO Infiltrators as efficient and accurate tools to show soil health improvements overtime and collect data to improve soils data in the NASIS database.



**Infiltrators going through the cycles. Other than to check the progress and water tank levels, it does everything on its own.**



**Roam Ranch Bison grazing in the background as the SATURO is running in the first field.**

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