

## SOIL AND PLANT SCIENCE DIVISION

# Technical Soil Services

## South Central Region



### **Kerrville, Texas, Major Land Resource Area (MLRA) Soil Survey Office (SSO)**

### **Kerrville Service Center Staff Provide Educational Talks at Kerr County Ag Day**

#### **Purpose**

On May 12, 2023, Kerrville Service Center staff, Missie Dreiss, Kerr County Soil and Water Conservation District (SWCD), and Natural Resources Conservation Service (NRCS) Soil and Plant Science Division (SPSD) staff Monica Polgar, ecological site specialist, and Travis Waiser, MLRA SSO leader and soil scientist, teamed up to give two educational talks about the value of soil and water to fourth-grade students across Kerr County, Texas.

#### **Background**

Students came from six public elementary schools in Kerrville, Ingram, and Center Point along with two private schools located in Kerr County. A total of 456 students along with their teachers rotated through 11 stations to learn different aspects about agriculture and natural resources. Polgar and Dreiss gave a demonstration on how much soil on Earth can be used for food and the influence rainfall has on runoff and groundwater recharge. To highlight the importance of protecting our soil, they used an apple to show the amount of soil on Earth that can be used to grow and produce the food we eat. Next, they used a rainfall simulator to guide students through the impact rainfall has on runoff and ground water recharge depending on the land use and land cover by observing four different groundcovers: little bluestem, bare ground, an impervious surface, and mulch. Waiser used soil profiles to talk about soil layers and demonstrated the size difference between sand, silt, and clay by comparing them to a beach ball, baseball, and paper hole punches.

#### **Key Outcomes**

The students learned about soil layers, soil texture, and how soil influences many core aspects of their daily lives. They were also left with a better understanding of why deep-rooted vegetation can improve groundwater recharge and reduce surface runoff.



Figure 1. Travis Waiser, Kerrville MLRA SSO soil scientist and MLRA leader, used a bag of leaves to demonstrate to students where soil organic matter originates from.



Figure 2. Missie Dreiss, Kerr County SWCD employee, used an apple to visualize to students the amount of topsoil on Earth that can be used to grow and produce the food. Behind her is the rainfall simulator.