

# Soil and Plant Science Division

## Technical Soil Services

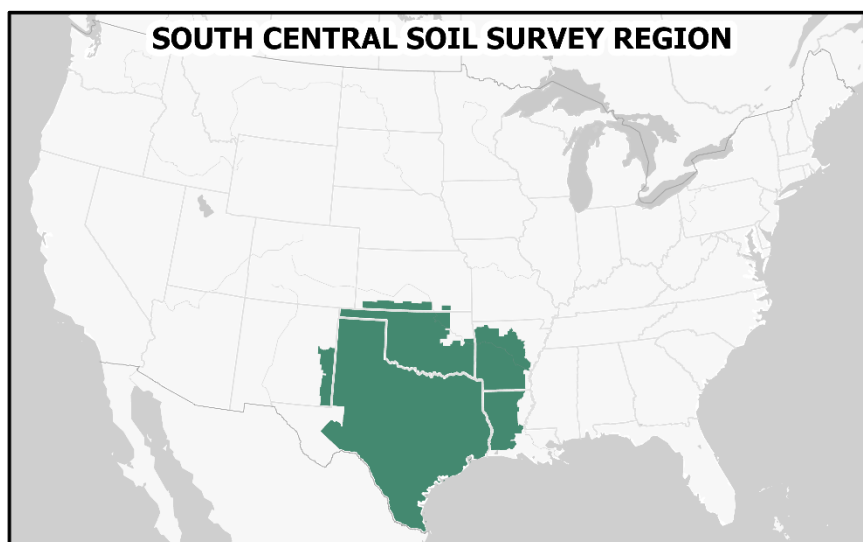
### South Central Region

## **SPSD Staff Assist with Texas State 4-H Soil Judging Contest**

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

#### **Purpose**

On May 29, 2025, staff from the Soil and Plant Science Division (SPSD) Bryan, Texas, MLRA SSO assisted with setting up the Texas State 4-H Soil Judging Contest in Bryan, Texas (fig. 1). Dr. Jake Mowrer from the Soil and Crop Sciences Department at Texas A&M University hosted the contest for 9th through 12th grade students from all over the State. The Bryan MLRA SSO staff also helped create the answer score cards for the four contest pits.



**Figure 1.—Extent of the South Central Soil Survey Region, which includes Bryan, Texas.**

## Background

Bryan MLRA SSO staff Dr. Amichev, office leader, and Adryn Velaquez, soil scientist, helped set up the soil pits and write the descriptions for the pits in preparation for the Texas State 4-H Soil Judging Contest in Bryan, Texas (fig. 2). They recorded the surface and subsoil texture, depth, structure, and consistence (fig. 3). Dr. Amichev also helped determine the slope for all four sites.

Soil judging contestants are evaluated on their knowledge and ability to determine surface and subsoil texture, depth, structure, and consistence as well as their ability to use other site factors, such as slope, to determine classifications for surface runoff, drainage, infiltration, and permeability. The contestants then must combine all these classification results to estimate overall land use suitability and limitations for each contest site.



**Figure 2.—(Left) Velaquez, Dr. Mowrer, and a group of Texas A&M AgriLife program students walk to one of the soil pits. (Right) Velaquez (center) is joined by two undergraduate students at the fourth contest soil pit to determine soil horizon depths and properties.**





**Figure 3.—Contest soil pit profiles of several different Alfisols formed on a stream terrace of a tributary of the Brazos River.**



## Key Outcomes

The Texas State 4-H Soil Judging Contest is an annual event that helps students gain more experience in assigning suitability classes to land based on the potential for crop production. During the setup day for the contest pits, Dr. Amichev and Velasquez also assisted five undergraduate students working with Dr. Mowrer with soils-related questions and provided them with brief information about potential future careers with NRCS. The Bryan MLRA SSO staff used this opportunity to share their expertise with soil texturing, soil horizon delineations and depths, and slope determination.

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