

SOIL AND PLANT SCIENCE DIVISION

Technical Soil Services

South Central Soil Survey Region

Lubbock, Texas, MLRA Soil Survey Office

MLRA Soil Survey Office Staff Assists Texas Tech University with Field Exercises

Purpose

Professor Daniel Hirmas of the Plant and Soils Science department at Texas Tech University (TTU) asked the Lubbock MLRA Soil Survey Office (SSO) to assist students describing soils during the soil description lab portion of their Principles and Practices in Soils course. Dr. Hirmas appreciated the expertise and field techniques the staff shared with the students during the labs.



Figure 1. Large prismatic peds extracted from pit face.

Background

The MLRA SSO in Lubbock has assisted TTU's Plant and Soil Science department with soil description labs for the Principles and Practices in Soils course (PSS 2432) for several years. In 2023, SSO staff assisted during the week of September 11th. The department held the labs at a pre-existing pit within the Texas Tech Native Rangeland area. The SSO

staff assisted students in determining the soil texture, structure, and color of each horizon, or layer, in the soil. Students used this information to describe the soil exposed in the pit. Students had to analyze soil characteristics on site and gather soil samples for laboratory analysis. The students will run particle-size analysis, calcium carbonate percent, pH, and organic carbon in the laboratory.



Figure 2. Dr. Hirnas explains soil principles while students listen.

Key Outcomes

The Principles and Practices in Soils class (PSS 2432) is a required course for students in several departments. The lab for this class provides an opportunity for Texas Tech University students to gain real hands-on experience describing a soil. The Lubbock MLRA SSO soil scientists make sure students understand the soil description process and why soils information is important. Over the years, students have taken an increased interest in this lab experience, and they ask good and interesting questions. These soil labs will continue to provide important outreach, educational, and recruiting opportunities for NRCS.



Figure 2. Students in the lab conferring on soil structure, texture, and color.