

SOIL AND PLANT SCIENCE DIVISION

# Technical Soil Services

North Central Region



## Springfield, Missouri, Major Land Resource Area Soil Survey Office

### Future Farmers of America Soil Judging Workshop

#### Purpose

During March and April in Missouri, high school Future Farmers of America (FFA) soil judging takes place throughout the state. The weather can be unpredictable this time of year, so setting up and conducting a soils event can be trying at times. The Springfield Major Land Resource Area (MLRA) Soil Survey Office has approximately 13 soil judging contests or workshops on its schedule for this time frame. These types of events help to meet the Technical Soil Services hours the office provides to the state.

#### Background

On March 8, 2023, the Springfield MLRA Soil Survey Office assisted with a FFA Soil Judging Workshop hosted by the University of Missouri Southwest Research, Extension and Education Center in Mt. Vernon, Missouri. Approximately 90 area high school students attended the informative soils training that is designed to prepare students and advisors for the upcoming FFA Soil Judging season. Those presenting were Gene Campbell, Springfield MLRA Soil Survey Office Leader, JR Perkins, MLRA Soil Scientist, and Lindsey Anderson, Area Resource Soil Scientist. Matt Massey from the University of Missouri Southwest Research, Extension, and Education Center assisted and provided equipment for the soil scientists.

#### Key Outcomes

The workshop had three soil pits located on different landform positions where the soil judging students could take a mock exam and review it with a soil scientist. This type of training is very valuable to the instructors and students participating in the hands-on soils event. At the training, students can get down into a soil pit and observe the physical properties of the soil as they occur naturally in the profile. At each soil pit the students must be able to identify basic soil color, texture, structure, rock fragment content, special features (fragipan, abrupt textural change), and horizon name for 4 layers. They need to know the effective rooting depth, calculate available water



capacity, soil permeability of the surface and subsoil, depth to high water table, and shrink-swell potential. They also need to determine site characteristics such as what landform the site is on, slope percentage, aspect, parent material, stoniness, and rockiness. Finally, students take all that information and determine management interpretations for irrigation suitability, hazards and limitations for cropping, pond reservoirs limitations, limitations for dwellings with basements, limitations for septic tank absorption fields, and limitation for sewage lagoons.

There has been a high demand for this training throughout the state because it brings together the soil judging communities where feedback about successes or concerns can be addressed for the future.



*Soil profile at one of the sites.*





*Students determining site information.*