LAND EVALUATION
Revised 4/16/15

PURPOSE
To help integrate qualitative skills in the developing and understanding of soil sciences in conjunction with the Agricultural Education curriculum.

OBJECTIVES
- Develop knowledge of soil classification by evaluating land uses.
- To increase analytical thinking procedures
- Increase students’ knowledge in prevention of soil erosion
- Increase knowledge of Soil Conservation through practice methods
- Allows students to pursue job opportunities and an interest in a soil science field

COMMON CORE REFERENCES
7-8th Grade
CCSS.ELA-Literacy.RST.6-8.3 Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

9-10th Grade
HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.

11-12th Grade
HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.

EVENT RULES
Pit Evaluation
Four pits will be analyzed on land class factors and land treatment by each participant. Each pit will count 75 points. Pit depth over 72” will be indicated on the pit card.

Pit cards and Water
Pit cards and water will be provided.

Ribbons
Vertical ribbons indicate the judges official zone.
Horizontal ribbons will not be utilized.

Clipboards
ONLY clear plastic clipboards will be allowed.

Team Members
This team may consist of four members with the three highest total scores making the team score.
Brush Control Defined for New Mexico Land Judging Sites

Much of New Mexico’s rangeland is impacted by perennial brush and invasive species. It is a wise practice to eliminate undesirable species by mechanical or chemical practices. Perennial brush and other undesirable species should be controlled irregardless of "size" in an effort for desirable grass species to thrive. The following are examples of common NM plants that should be controlled:

- Mesquite
- Greasewood
- Creosote
- Sagebrush
- Cholla Cactus
- Prickly Pear Cactus
- Broom Snakeweed
- Any Tree Species

Special Considerations for Contest:

Windbreak may be used on all classes
Topsoil and subsoil from various locations may be used in the contest

References

Land Judging in Oklahoma will be used as reference instructions. Copies of this bulletin
CONDITION OF FIELD

Field #: _______________________

1) Soil Tests Show
   A) pH
   B) Phosphorus - (p205) __________ lbs./acre
   C) Potassium - (k20) __________ lbs./acre
   D) Nitrogen - (N) __________ lbs./acre
   E) Other - __________

2) Pay no attention to present mechanical practices.

3) Thickness or original topsoil was:

4) Size of field: __________ acres

5) Treat for most intensive use.

6) Other Factors:
Flow Diagram for Estimating Soil Texture by Feel

**Start:** Take approximately 1 tablespoon of soil and wet by adding water in small amounts. Knead to break down all aggregates until soil is plastic and moldable, like moist putty.

**Step 1:** Try to form a ribbon of uniform thickness and width by gently pushing the soil between thumb and forefinger. Allow the ribbon to emerge and extend over the finger, breaking from its own weight.

**A:** Soil does not ribbon — **coarse texture**

**B:** Soil does ribbon — What is the length of the ribbon?
  
  **B1:** If the ribbon is over 2 inches long: **fine texture**
  **B2:** If the ribbon is 1 to 2 inches long: **moderately fine texture**
  **B3:** If the ribbon is less than 1 inch long: **Go to Step 2**

**Step 2:** Excessively wet a small pinch of soil in your palm and rub with forefinger.

**C:** Is the soil gritty?
  
  **C1:** The soil is not gritty—**medium texture**
  **C2:** The soil is gritty—**moderately coarse texture**