

# SOIL JUDGING

2025 Texas 4-H Roundup



## CONTEST RULES

- Each contestant will be given a number. This number must appear on the scorecards along with the pit number (or letter).
- Each contestant has 20 minutes from the time the pit judge says start.
- It is advisable for the contestants at each pit to be split into two groups. One group is allowed into the pit for the first 5 minutes, while the second group must wait (provides time to measure slope and evaluate landscape). The final 10 minutes are then open to all contestants.
- The contestants must give a completed score card to pit official upon the call “TIMES UP”. Contestants failing to give card to pit official before leaving pit area or after “TIMES UP” is called will have scores for that particular pit voided.
- Each team will consist of at least 3 members and not more than 4 members.
- Can compete as an individual
- In general, no more than 15-20 persons should be in or around a pit at one time.
- Large contests, where 15+ teams are present, should be split into 5-8 pit numbers, thus at time 1 (A-D enter the pits) at time 2 (B-E) enter, at time 3 (C-F) enter).
- This staggering will cause some individuals to be out of the pits in wait mode.
- It is desirable to funnel these individuals back into the pits as soon as possible.
- Under no circumstances should two members from the same team/county be in the pits at the same time.
- Subsequently, these members should remain separated during all other times
- Teams or contestants acting in un-sportsmanship like behavior may be disqualified by any contest official. The contest superintendent will have final authority over all questionable actions.

## APPROVED EQUIPMENT

- Contestants may carry: clipboard, pencils, water bottle, knife, and towel.
- Contestants ARE NOT ALLOWED to carry: instructional or reference materials of any kind.

# SOIL JUDGING

## JUDGING

The score card judging is a time consuming process. It is advisable to locate 4-6 individuals for score card grading. Each score card should be marked, tallied, and signed twice. Each section is to be worth 10 points, except Section A-C which are worth 20 points, for a maximum of 150 points per pit. The contest superintendent and pit judges may require more than one mark per section. In this case, each mark may be assigned an individual value such as:

3 correct answers,

- if mark 1 then 3 points
- if marked 2 then 6 points
- all marked then 10 points
- if marked 2 correct and 1 incorrect then 3 points
- if marked 1 correct and 2 incorrect then 0 points
- No negative credit will be given.

The team scores will be based on top three individuals on each pit. For example:

Individual	pit 1	pit 2	pit 3	pit 4	total
Tom	100	150	70	40	360
Bill	20	20	150	100	290
Jenny	150	150	100	10	410
Luke	110	10	130	120	370
Team Total	360	320	380	260	

For a team total of 1320 points

- This scoring method generally allows each contestant to participate in the final team score. For individual totals, all four pits are used. In this case, the ranking would be Jenny, Luke, Tom then Bill.

## SETTING UP THE PITS

- Four soil pits should be dug that represent some diversity in soil genesis and morphology. These pits should not be deeper than 4 feet, or wallshoring is required. The pits should also be 3-5 feet wide, although sandy pits should be 6+ feet wide. As a rule, the wider the pit the better.
- A control zone will be established and outlined with string and nails. This zone should be picked clean to show structural details. The zone chosen should be representative of the soil 3-4 feet on each side of the zone. In addition, the official judges will use the control zone for all judging. No contestant's will be allowed to pick, dig, or otherwise manipulate this zone.
- A ruler and water bottle should be provided at each site. In addition, two slope markers should be positioned 100 feet apart. The positioning of these markers should represent the landscape in which the pit lies. It is advisable that the top of each marker be of similar height.

## Land Judging Scorecard-Senior

Contestant Name \_\_\_\_\_ Site Number \_\_\_\_\_ County \_\_\_\_\_

### I. SOIL FACTORS

#### A. TEXTURE

- | Surface                                 | Subsoil               |
|---|-----------------------|
| <input type="radio"/> Coarse            | <input type="radio"/> |
| <input type="radio"/> Moderately coarse | <input type="radio"/> |
| <input type="radio"/> Medium            | <input type="radio"/> |
| <input type="radio"/> Moderately fine   | <input type="radio"/> |
| <input type="radio"/> Fine              | <input type="radio"/> |

#### B. STRUCTURE

- | SURFACE  | Subsoil               |
|--|-----------------------|
| <input type="radio"/> Single grained                     | <input type="radio"/> |
| <input type="radio"/> Granular, and/or subangular blocky | <input type="radio"/> |
| <input type="radio"/> Blocky                             | <input type="radio"/> |
| <input type="radio"/> Prismatic                          | <input type="radio"/> |
| <input type="radio"/> Platy                              | <input type="radio"/> |
| <input type="radio"/> Massive                            | <input type="radio"/> |

#### C. CONSISTENCE (when moist)

- | SURFACE                            | Subsoil               |
|------------------------------------|-----------------------|
| <input type="radio"/> Loose        | <input type="radio"/> |
| <input type="radio"/> Very friable | <input type="radio"/> |
| <input type="radio"/> Friable      | <input type="radio"/> |
| <input type="radio"/> Firm         | <input type="radio"/> |
| <input type="radio"/> Very firm    | <input type="radio"/> |

#### D. DEPTH OF SOIL

- Deep
- Moderately deep
- Shallow
- Very shallow

#### E. SLOPE

- Nearly level
- Gently sloping
- Moderately sloping
- Strongly sloping
- Steep
- Very steep

#### F. EROSION

- None to slight
- Moderate
- Severe
- Very severe

### II. INTERPRETATION OF SOIL FACTORS

#### G. SURFACE RUNOFF

- Ponded
- Very slow
- Slow
- Medium
- Rapid
- Very Rapid

#### H. SITE DRAINAGE

- Poor
- Fair
- Good
- Excessive

#### I. INFILTRATION RATE INTO SURFACE

- Very Slow
- Slow
- Moderate
- Rapid

#### J. PERMEABILITY OF SUBSOIL

- Very slow
- Slow
- Moderate
- Rapid

#### K. FACTORS LIMITING LAND USE

- Available moisture holding capacity
- Movement of air, moisture and roots
- Water erosion hazard
- Wind erosion hazard
- Workability
- Depth
- Slope

#### L. LAND USE SUITABILITY

- Suitable for cultivation
- Not suitable for cultivation



**Land Judging Scorecard-Intermediate**

**Contestant Name** \_\_\_\_\_ **Site Number** \_\_\_\_\_ **County** \_\_\_\_\_

**I. SOIL FACTORS**

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**A. TEXTURE**

- | Surface                                 | Subsoil               |
|---|-----------------------|
| <input type="radio"/> Coarse            | <input type="radio"/> |
| <input type="radio"/> Moderately coarse | <input type="radio"/> |
| <input type="radio"/> Medium            | <input type="radio"/> |
| <input type="radio"/> Moderately fine   | <input type="radio"/> |
| <input type="radio"/> Fine              | <input type="radio"/> |

**B. STRUCTURE**

- | SURFACE  | Subsoil               |
|--|-----------------------|
| <input type="radio"/> Single grained                     | <input type="radio"/> |
| <input type="radio"/> Granular, and/or subangular blocky | <input type="radio"/> |
| <input type="radio"/> Blocky                             | <input type="radio"/> |
| <input type="radio"/> Prismatic                          | <input type="radio"/> |
| <input type="radio"/> Platy                              | <input type="radio"/> |
| <input type="radio"/> Massive                            | <input type="radio"/> |

**C. CONSISTENCE (when moist)**

- | SURFACE                            | Subsoil               |
|------------------------------------|-----------------------|
| <input type="radio"/> Loose        | <input type="radio"/> |
| <input type="radio"/> Very friable | <input type="radio"/> |
| <input type="radio"/> Friable      | <input type="radio"/> |
| <input type="radio"/> Firm         | <input type="radio"/> |
| <input type="radio"/> Very firm    | <input type="radio"/> |

**D. DEPTH OF SOIL**

- Deep
- Moderately deep
- Shallow
- Very shallow

**E. SLOPE**

- Nearly level
- Gently sloping
- Moderately sloping
- Strongly sloping
- Steep
- Very steep

**F. EROSION**

- None to slight
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**II. INTERPRETATION OF SOIL FACTORS**

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- Poor
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- Available moisture holding capacity
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- Workability
- Depth
- Slope

**L. LAND USE SUITABILITY**

- Suitable for cultivation
- Not suitable for cultivation