

Setting up and holding a Land Evaluation Contest

Jan. 8, 2020

Plan

The Coordinator for the Vocational Agricultural Instructors (FFA) needs to determine the approximate location and dates for the regional and state contests as early as possible. Instructors should apply for hosting the regional contest by July 1. Approximate numbers of participants should be determined at this time. These steps should allow the coordinator to contact and make arrangements with the support agencies: University of Nebraska, Natural Resources Districts, Natural Resource Conservation Service and others. The earlier these agencies are contacted, the easier it is for them to make arrangements for staffing, contest site preparation (field and meeting area), and procuring adequate contest materials. Contests are best if scheduled during the middle of the week, Tuesday, Wednesday or Thursday. This allows the pits to be dug on Monday for a Tuesday contest or the pits to be filled on Friday after a Thursday contest. The pits should not remain open any longer than necessary.

Agencies

The following are historically what has been done:

- Vocational agriculture instructors
 - Planning for hosting regional and state contest
 - Coordinating contest dates
 - Registering and preparing contestants
- Conservation and Survey Division, University of Nebraska
 - Assistance in planning of contest
 - Score Cards
 - Training
- Natural Resources Districts (NRD)
 - Commonly host the contest
 - Provide assistance with
 - Scoring
 - Tabulating
 - Field site preparation
 - Staffing for the contest
- Natural Resources Conservation Service (NRCS)
 - Assistance in staffing for the contest
 - Soil scientists and conservationists help with:
 - Selecting the field site
 - Obtaining needed permissions
 - Making 1- calls Judging the soil pits and fields for the contest.
 - They need to know at least 30-90 days ahead of the contest in order to plan their schedules.
- Other organizations and agencies may provide staffing assistance or other services that might be needed. See “Recruiting Land Judging Volunteers” section.

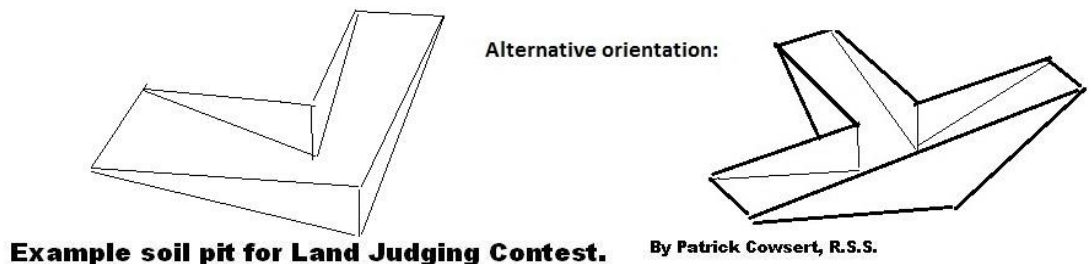
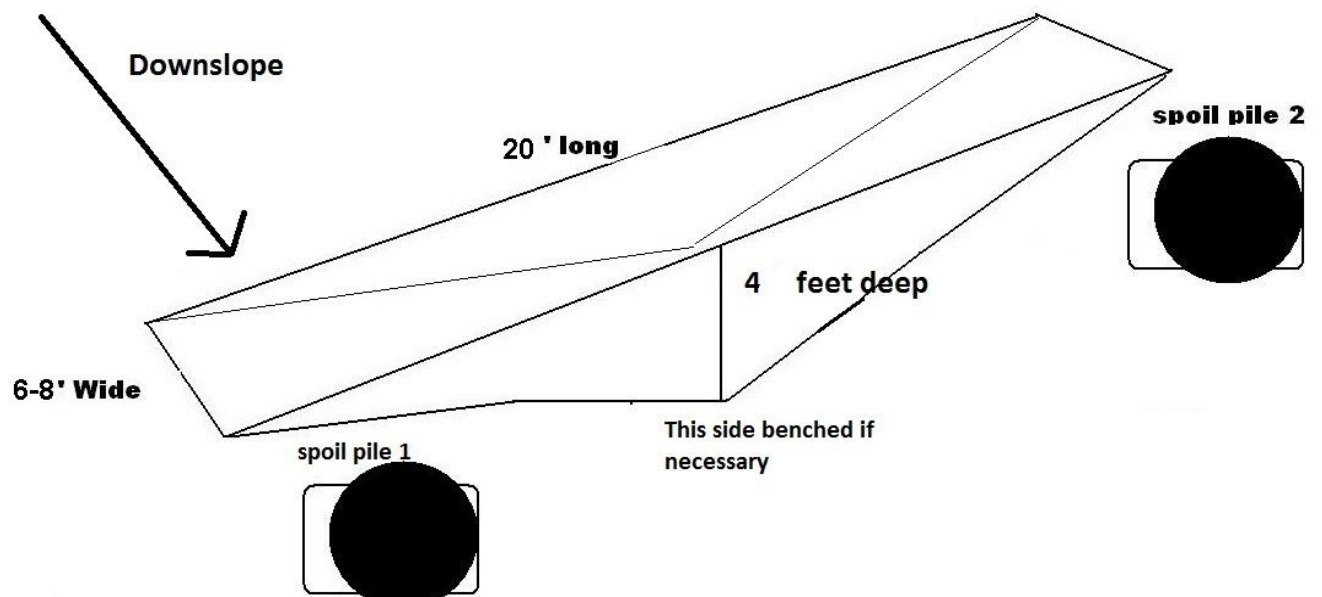
Field site

Field site selection and securing permission for the contest and pits is usually coordinated by the local NRCS soil scientist and conservationist. The site should have reasonable access for vehicles, usually school busses or vans and a safe area for parking and assembling the contestants prior to and at the conclusion of the field judging.

Select four sites within a reasonable walking distance. It is preferable that the sites be about the same walking time between them.

A pit should be dug at each site to show the soil profile and allow contestants to observe the natural soil in place. Modification of the soil profile is discouraged. The profile should be lighted by the sun during the late morning. The pits should be large enough for several contestants to enter at any one time, not deeper than 4 feet. At least one end of the pit should be stepped out or shaped to provide easy access (preferably two sides). The side of the pit opposite the soil profile should be sloped to a stable grade to prevent trapping contestants should the pit collapse.

Per Osha Manual: *The excavation standards do not require a protective system when an excavation is made entirely in stable rock or when an excavation is less than 5 feet (1.52 meters) deep and a competent person has examined the ground and found no indication of a potential cave-in.*



Soils for the contest should be chosen so they fit into one of the soil classifications given in the official Capability Chart for the area of the contest.

- An 'official profile' area about one-foot wide is prepared on the profile face of the pit and marked with flags at the surface, a string may be added along the sides of the area.
- Contestants are not allowed to disturb this area and must make their observations on either side of the reserve area.
- A sample of adequate size is obtained from the surface layer and placed in a container labeled 'Surface layer'. Another sample is obtained from the subsoil or most restrictive layer for permeability determination and is placed in a container labeled 'Control section'. These samples are used by the contestants for determining surface texture, subsoil/control section texture and permeability.
- Official determinations should be made from these samples.
- Water should be provided for moistening the samples for texture determination. If the soil profile is dry a spray bottle of water may be provided for misting the soil profile.
- Soil spatulas/trowels should be provided at each field site so contestants may use them to examine the soil profile outside of the designated profile face.

The official field site is marked by flags and should be at least 100 feet square. This field is not considered to have any conservation practices, such as terraces installed. Any pre-existing practices are ignored in prescribing proper practices. The only existing features used in judging are gullies, weeds, trees and brush which may be present on the site.

Slope stakes are established within reasonable proximity to the official field. These stakes should be driven to the same height and should be placed with the normal slope of the land. Runoff should be expected to flow generally from the upper to the lower stake. The slope stakes should be placed 100 feet apart or can be placed 50 feet apart with instructions to the contestants that 50 feet is used at this site.

An official key should be completed and submitted to the official scoring agency the day before the contest if possible, so scoring keys can be completed in advance. Assign the point values to the various answers relative to its importance.

Official Field Instruction cards should be prepared for each site and include the site number, thickness of the original topsoil, water table depths, flooding and ponding information, soil test data, deposition soil factors, and any other factors. Suggested cards are available on the website.

General contest rules

1. No talking or comparing cards.
2. No clipboards, bubble vials, tape measures or other measuring devices are allowed.
3. Contestants can have the following pieces of equipment:
 - writing instrument (pencils are preferred, especially in wet weather)
 - contest cards
 - capability chart

Knives are NOT allowed at contests

*Cell Phones are NOT allowed at contests***

**Contestants are not allowed to have a phone during the contest. The contest staff should have a zero tolerance for such devices. If contest staff see a phone they should pull the card at the judging site. Students will not be allowed to continue judging while the phone is still with them. Students need to find a teacher to leave their phone with until the end of the contest if they wish to continue. If contest staff see a phone while students travel between sites, they should pull the card for the upcoming site. This rule also includes Apple watches or any device that may be used to communicate. If advisors have students that have a watch that may be confused with an Apple watch or similar device, please suggest that they leave it on the bus or van with their phone. Many students may use a standard watch to help monitor time. **

4. The land evaluation handbook and the most current capability chart for the area will be used to resolve contest differences and should be used in setting up and conducting the contests. The latest information will be available on the official Land Evaluation website, it is the obligation of the instructors, site judges and others to make sure they are using the most current information. Changes will not be made to the 'official' site within 30 days of the first contest for a given year.
5. Contestants are only allowed to take notes on site instructions (ie, soil depth, erosion and slope). Other written information on scorecards and capability charts are not allowed.

Conducting the Contest

- Prepare cards ahead of time by having student cards and capability charts separated and placed in a large envelope labeled for each school. Contestants will receive scorecards and capability charts after arriving at the judging site.
- After receiving contest materials and instructions from site judge, the contestants and adults will be divided into 5 (or more) rotational groups. Contestants with the letter A or #1 will go to site 1, B or #2 to site 2, C or #3 to site 3 and D or #4 to site 4. The Adult and previous winners group will wait in the 5th rotational group and move to site 1 when it is rotation time.

- Allow groups 20 minutes to evaluate each site. Before judging a site, contestants will be given field note information from the field instructor.
- Use a signal, such as a car horn from a central location that can be heard at all sites for timing. This notifies the group leader to move the students to the next site when the 20-minute evaluation period is finished.
- Cards are collected by the site judge as contestants finish or when time is expired. Someone should be designated to collect all the cards and return them to the central point for scoring, if the distance is such, two people may be needed.

During the State Contest, site buckets with representative samples of soil textures in the contest area should be provided for contestants to examine before the contest in the registration area.

Scoring and Grading

Categories on the scorecard carry varying values depending on the judges' evaluation of its relative importance. The total possible points on each site are 100, with 50 in part 1 and 10 in part 2 and 40 for part 3. Each answer must be legibly marked to get credit for the answer. Only one answer per item will be counted, if multiple blocks are marked in part 1 or part 2, no credit will be given (erasures and changed answers are OK). Only one block is to be marked in part 3, section A. All applicable blocks need to be marked in part 3, sections B through D.

The points will be assigned to each correct answer by the official who scores the official score cards for the contest, usually the soil scientist assisting with the contest. They will use their judgment to assign values to each answer according to how important they feel the determination is to evaluate the site.

In scoring part 3, using the total number of blocks that should be checked, count down the contestant's card that many check marks and draw a line to stop counting the score. Then calculate the points earned from correct check marks above that line.

Example 1 (see Appendix A): there are supposed to be 8 check marks in part 3. The contestant checks 1 block in section A, and 7 more in section B, and 1 in section D. The scorer will only look at the first 8 marks going down the card. The scorer should draw a line after the contestant's first 8 marks and not give credit for answers farther down the card even if they are correct.

If each scorer has an answer key score card it allows the scoring to be quickly accomplished. It is sometimes preferred to cutout the answer blocks with an Exacto knife and overlay the answer key on the cards.

The use of the computer spreadsheet allows quick tabulation when the scoring and entry is completed. A master template will be provided – **NEW TEMPLATE CREATED FOR 2020, SO DELETE PREVIOUS TEMPLATE IF ON FILE!**

Method of breaking ties needs to be announced before starting the contest. This is how ties have been handled in some past contests, but alternative methods may be used:

- Choose a soil pit/field site as the tie breaker. Example: The student that scored highest on site #3 wins the tie. If a tie still exists then use scores from site #4, #2.
- If there is still a tie, use scores from Part 1 then Part 2 on the card. If still tied, names are drawn from a hat for the winner.

Awards (Area Contests)

INDIVIDUAL RIBBONS

Individual ribbons are given to contestants in descending order of scores (Purple, Blue, Red, and White) according to the number of ribbons based on the previous years' participation. When scores are announced, go in ascending order starting with your lowest scores first moving to the highest scores.

Example ONLY (number of ribbons given determined by number of contestants/ribbons sent to region)

1-10 places: Purple Ribbons

11-20 places: Blue Ribbons

21-30 places: Red Ribbons

31-40 places: White Ribbons

TEAM RIBBONS

A school's four highest-scoring students will be put on a team to determine if they are a state-qualifying team. Team Ribbons are awarded one ribbon per school in order of descending scores for each team (Purple, Blue, Red, White ****RIBBON COLORS MAY DIFFER****). When scores are announced, go in ascending order starting with your lowest scores first moving to the highest scores.

Example ONLY (number of ribbons given determined by number of contestants/ribbons sent to region):

1st place: Purple Ribbon

2nd place: Blue Ribbon

3rd place: Red Ribbon

4th place: White Ribbon

Plaques are presented to the top-scoring teams that qualify for the State Contest, which is based on the number of participating schools in the area contest. Only one team per school is eligible to qualify for state.

State Qualifying Numbers:

- Less than 3 schools in area contest – 1 team qualifies
- 3-4 schools in area contest – 2 teams qualify
- 5-9 schools in area contest – 3 teams qualify
- 10-14 schools in area contest – 4 teams qualify
- 15-19 schools in area contest – 5 teams qualify
- 20-24 schools in area contest – 6 teams qualify
- 25-29 schools in area contest – 7 teams qualify
- 30+ schools in area contest – 8 teams qualify

Students that place in the top 10 of an Area Contest but are not on a state-qualifying team may qualify to compete as an individual at the State Contest. These students will be awarded individual ribbons, but their score will not count on any team scores.

Example:

1st place: John Legend, Lincoln High

2nd place: Norman Bates, Hampton

3rd place: Nick Jonas, Hampton

4th place: Justin Bieber, Minden

5th place: Stevie Nicks, Hampton

6th place: Taylor Swift, Pawnee

7th place: Neil Diamond, Hampton

8th place: Elton John, Axtell

9th place: Paul McCartney, Raymond Central

10th place: Pat Benatar, Hampton

Hampton's state-qualifying team would be: Norman Bates, Nick Jonas, Stevie Nicks and Neil Diamond (top 4 scorers). However, Pat Benatar from Hampton would also get to compete at the State Contest (as an individual not on the team) because she scored in the top 10.

John Legend from Lincoln High would also qualify to compete as an individual at the State Contest. He scored first, but the rest of his classmates did poorly, so there are not enough students to make a Lincoln High team.

Instructors must notify the State chairman by the Friday following the final scheduled Area Contest in order to compete, so the State Contest scoring sheet and scorecards can be completed.

Contest Staffing

The following is a list of staff people needed to carry out a contest. Numbers of '*' staff may need to be increased if more contestants are present. Agricultural Educators/Teachers may be requested to assist at area contests as Group Leaders or Field Foreman.

Field Location

Site judge* - one at each of the 4 sites, give field instructions, monitors the contestants, collects scorecards

Timer - one, centrally located to sites, preferably in a position to see when contestants have reached each site, signals start of judging and end of judging time. Twenty (20) minutes is allowed for judging. Travel time between sites will vary and judging should not be started until all contestants reach their next site.

Card carrier - usually 2, one collects first set of cards and takes to scoring location and returns to field for 3rd set, second person collects second set and returns them to scoring location. Second person can return for 4th set or they can be returned by another official from the field location.

Group leader - 4, one for each group (A, B, C, & D), leads the groups from one site to the next.

Field foreman - gives preliminary instructions when contestants arrive at the field site, may announce answers

Clean-up* - pick up signs, water containers, dispose of soil samples/boxes, pickup area

Someone* to make sure the pits are filled in properly and if needed reseeded. Thank cooperator.

Scoring Location

Registration* - 2-4 - check registration forms, changes, etc

Computer entry* - 2 (depends on computer resources), enter contestant names, scores

Scoring* - 4 per site if possible. Scorecards are scored by 2 people before being entered, one scoring in red, one in blue.

Card sorter* - 1-2, sort cards by contestant numbers for easier computer entry, sort cards after scores are entered for easier access if needed for rechecking or ties.

Equipment needs

adding machines/calculators
red and blue pencils for scoring and checking
official score sheets

Other items

Plan for refreshments for the contest staffing people.

Materials needed for field site preparation

1. 16 flags to mark corners of the field to judge
2. 8 lathe for slope stakes
3. 8 flags for marking official profile
4. 4 stakes with large numbers (1-4) to mark the field numbers
5. 4 signs for group leaders (A, B, C, D)
6. 8 small boxes (white trash bags) for soil samples (Surface layer and control section)
7. 4 water bottles for wetting samples
8. Soil Spatulas/trowels to be used by contestants to pick soil for profile in the pit at each field site.
9. 4 official score cards

10. 4 official field instruction cards

11. At the State Contest registration site – A set of buckets with representative samples of soil textures for that contest area for contestants to examine before the contest

Recruiting Land Judging Volunteers

Traditionally, NRD staff and NRCS employees handle volunteer tasks at the field sites. Additional volunteers are often needed for check-in, scoring cards, serving food, etc. Below is a list of places to start finding volunteers:

Nebraska Extension – Call your county extension agents; sometimes there is a 4-H Club that may be willing to serve food as a fundraiser.

- Natural Resources Districts – NRD staff in the region that aren't hosting that year
- NRD Board Members
- Nebraska Association of Resources District (NARD) – Staff members may be able to help
- Lions Club/Kiwanis Groups
- Environmental Clubs (Keep Nebraska Beautiful, Master Gardeners, etc.)
- Environmental Non-Profits
- Senior Citizen Groups
- Local Colleges – Student Volunteers
- Corn Growers Association – Local Chapter Volunteers (if not harvesting)
- Nebraska Farm Bureau – County Chapter Members (if not harvesting)
- Nebraska Cattlemen/Beef Council – Chapter Members
- Agronomist Companies in the Area
- Parent-Teacher Organizations/Associations (PTO or PTA)

Suggested Instructions to Contestants – At Start of Contest

1. Check your contest cards – make sure you have:

- 4 contest cards with your contestant number
- Summary card for your record
- Capability chart
- Pencil

2. Contestants can have the following pieces of equipment:

- writing instrument (pencils are preferred, especially in wet weather)
- contest cards
- capability chart

****Contestants SHOULD NOT have in their possession a phone, smart watch or other communication device.****

3. Soil Scientist or an official should state their intentions and thoughts on when they would use Treatment #23 (Defer Grazing) OR Treatment #24 (Continue Grazing)

4. You will have **20 minutes** to judge each site.

5. Results may be given the day of the contest or emailed the next day.

6. No talking between contestants. Cards may be taken up if this rule is violated.

7. Contestants are only allowed to take notes on site instructions (soil depth, erosion and slope). Other written information on scorecards and capability charts are not allowed.

8. You will divide up into groups. Please move with your group leader.

APPENDIX A – SCORING & GRADING

Land Evaluation Scorecard

Contestant # 52

Field # 4

Name Johnny Depp

School Axtell High School

Place Label Here
(Revised January 2020)

Soil Factors - Part 1

Mark appropriate box

Score

5	A. Depth of Soil <input checked="" type="checkbox"/> 1. Very Deep/Deep <input type="checkbox"/> 2. Moderately Deep <input type="checkbox"/> 3. Shallow <input type="checkbox"/> 4. Very Shallow
	B. Surface Texture <input type="checkbox"/> 1. Fine <input type="checkbox"/> 2. Moderately Fine <input checked="" type="checkbox"/> 3. Medium <input type="checkbox"/> 4. Moderately Coarse <input type="checkbox"/> 5. Coarse/Very Coarse
	C. Permeability <input type="checkbox"/> 1. Very Slow/Slow <input checked="" type="checkbox"/> 2. Moderately Slow <input type="checkbox"/> 3. Moderate <input type="checkbox"/> 4. Moderately Rapid <input type="checkbox"/> 5. Rapid <input type="checkbox"/> 6. Very Rapid
	D. Slope <input type="checkbox"/> 1. Nearly Level <input type="checkbox"/> 2. Gently Sloping <input checked="" type="checkbox"/> 3. Moderately Sloping <input type="checkbox"/> 4. Strongly Sloping <input type="checkbox"/> 5. Steep <input type="checkbox"/> 6. Very Steep
10	E. Thickness of Surface <input type="checkbox"/> 1. Thick <input checked="" type="checkbox"/> 2. Moderately Thick <input type="checkbox"/> 3. Thin
10	F. Erosion - Wind & Water <input type="checkbox"/> 1. None to Slight <input checked="" type="checkbox"/> 2. Moderate <input type="checkbox"/> 3. Severe <input type="checkbox"/> 4. Very Severe

Recommended Land Treatments - Part 3

Select from the list below, proper conservation practices that should be used or considered for use to conserve both soil and water, and to maintain or improve the productivity of the land in this field. Place a legible mark in the appropriate box(es).

Score

5	A. Land Capability Class (mark only one) <input type="checkbox"/> 1. Row crop/occasional soil conserving crop <input type="checkbox"/> 2. Row crop not more than 2 out of 4 years <input checked="" type="checkbox"/> 3. Row crop not more than 2 out of 6 years <input type="checkbox"/> 4. Row crop not more than 1 out of 4 years <input type="checkbox"/> 5. Continuous wheat fallow/chemical fallow <input type="checkbox"/> 6. Permanent vegetation <input type="checkbox"/> 7. Use only for wildlife or recreation
	B. Cropland <input checked="" type="checkbox"/> 8. Practice conservation tillage <input checked="" type="checkbox"/> 9. Do not burn crop residue <input checked="" type="checkbox"/> 10. Return crop residue to soil <input type="checkbox"/> 11. Practice field/contour strip cropping <input checked="" type="checkbox"/> 12. Plant a field windbreak for erosion control <input checked="" type="checkbox"/> 13. Terrace and farm on contour <input checked="" type="checkbox"/> 14. Maintain terraces <input checked="" type="checkbox"/> 15. Establish/maintain grassed waterways or tile outlets <input checked="" type="checkbox"/> 16. Construct diversion terrace, sediment basin <input type="checkbox"/> 17. No mechanical treatment needed
25	C. Rangeland - Wildlife <input type="checkbox"/> 18. Use prescribed burning <input type="checkbox"/> 19. Mow or spray for weed control <input type="checkbox"/> 20. Control brush and trees <input type="checkbox"/> 21. Proper pasture/range management <input type="checkbox"/> 22. Establish recommended grasses/legumes <input type="checkbox"/> 23. Defer grazing until cover is adequate <input type="checkbox"/> 24. Graze to utilize up to 60% forage production <input type="checkbox"/> 25. Control gullies <input type="checkbox"/> 26. Enhance wildlife habitat and recreation
	D. Fertilizer & Soil Amendments <input checked="" type="checkbox"/> 27. pH - soil amendments <input type="checkbox"/> 28. Nitrogen (N) <input type="checkbox"/> 29. Phosphorous (P) <input type="checkbox"/> 30. Potassium (K) <input type="checkbox"/> 31. Fertilizer or soil amendments not needed

Land Capability Class - Part 2

Mark appropriate box (10 points)

Score

10	<input type="checkbox"/> 1. Class I	<input type="checkbox"/> 5. Class V
	<input type="checkbox"/> 2. Class II	<input type="checkbox"/> 6. Class VI
	<input checked="" type="checkbox"/> 3. Class III	<input type="checkbox"/> 7. Class VII
	<input type="checkbox"/> 4. Class IV	<input type="checkbox"/> 8. Class VIII

Field Information Notes (not used in scoring)

Original topsoil thickness: _____ inches

Landscape position: upland | depression |

stream terrace | floodplain | sandhill meadow

Drainage: Ex | SE | W | MW | SP | P | VP

Flooding: None | Rare | Occ. | Freq.

Ponding: None | RP | OP | FP | VFP

Overhead Water Problem: Yes | No

pH: _____ N: Adequate | Deficient

P: _____ #/ac K: _____ #/ac

SCORING

Part 1: 50
Possible 50

Part 2: 10
Possible 10

Part 3: 30
Possible 40

Total Score: 90
Possible 100