



Land Judging

Purpose

Knowledge about soils can be organized and applied in managing farms, fields, and woodlands, in developing communities, in engineering work, and in many other ways. The Land Judging Career Development Event helps FFA members and Agricultural Education students to understand basic differences in soils. Students will be able to comprehend why soil responds differently to management practices, as well as how soil properties affect crop growth and homesite dwellings. FFA activities are an integral part of the instructional program in Agriculture, Food, and Natural Resources Education.

Objectives

Students will be able to

Land

- Understand basic soil differences.
- Know why soils respond differently to management practices.
- Realize the influence of land features on production and land protection.
- Select suitable soil and water conservation practices.
- Determine land capability class.
- Determine proper use and treatment.
- Determine soil texture, permeability, depth, slope, surface runoff, erosion, and sink-swallow.

Homesite

- Determine if there is a flood hazard.
- Determine if drainage is a problem.
- Determine if soils have high shrink-swallow properties.
- Understand that slope and unstable soil make erosion and soil movement a major problem.
- Understand that soils conditions exist that corrode pipes easily and require frequent replacement.
- Determine if the soil properties are favorable for lawn, shrubs, trees, flowers, and vegetables without extensive soil modification.
- Determine the soil limitations (slight, moderate, severe, very severe).
- Determine Land Use (foundations for buildings, lawns and landscape plantings, septic tank absorption field, sewage lagoon).

Event Rules

The complete rules, policies and procedures relevant to all New Jersey FFA Career and Leadership Development Events may be found in the CDE & LDE Event Participation Policy: https://nj.gov/agriculture/ag_ed/ffa/activity/CDE_LDE_Policy.pdf

- A team will consist of four members. The three highest individual scores will be totaled for the team score. Teams that have fewer than three members are not eligible for team awards, but students may receive individual awards.
- Each participant must have a clipboard, at least two No. 2 pencils, and a calculator.
- Participants are NOT allowed to use (or have visible) electronic devices during the event, unless for medical reasons or a portion of the event requires usage. This includes cell phones, tablets, etc. Participants will be allowed to use calculators, if specified for that event; however, cell phone calculators and graphing calculators are not permitted! **Failure to adhere to these rules will result in disqualification.**
- All individuals participating will judge in a cooperative manner following the rules set forth by the event coordinator.
- No school/chapter will use Rutgers University or Delaware Valley University facilities or locations for the training of teams. Contact with University faculty and staff is permissible. **Penalty will be disqualification.**
- This event will be scored using "Scan-tron" sheets. It is important for students to listen to directions and fill out the sheets correctly in order to receive credit. Sample scan-tron sheets are available for practice on the State Activity Guide. This event uses the Land and Homesite scan-tron sheets.
- There will be no separate alternate teams.
- Official dress is not required for this event. Participants are encouraged to dress for the weather, including boots.
- A student may not compete in more than one event during the New Jersey FFA Fall Career Development Events.
- The State level competition fee of \$11 per contestant will be paid by the competing school. If a chapter is at least **blue** affiliated, registration to state FFA career development events is waived.

Event Format

EQUIPMENT

Materials to be provided by the student:

- Two no. 2 pencils
- Clipboard
- Optional – students may wish to bring a non-programmable calculator and/or a gallon size Ziplock bag in case of rain. Students may also wish to bring a knife/nail or a towel/rag.

Participants are not to bring:

- Cell phones or other electronic devices
- Students may not have a tape measure (or other measuring device), water or study materials.

EVENT SNAPSHOT

Below is a brief overview of the Land Judging CDE:

This event consists of two phases:

Phase I – Land – 75 points X 4 pits = 300 Points

Phase II – Homesite Evaluation – 97 points X 4 pits = 388 Points

Students will be given 20 minutes at each pit.

A chapter may have a team of three (3) or four (4). The top three (3) scores are used in determining the team's rank.

Scantron will be used to score this event. At the end of this document is a sample of the sheets used, highlighting where to enter answers. You can get practice sheets here:

- Land: https://nj.gov/agriculture/ag_ed/ffa/activity/Scantron-Land.pdf
- Homesite: https://nj.gov/agriculture/ag_ed/ffa/activity/Scantron-Homesite.pdf

INDIVIDUAL ACTIVITIES

Students will be given 20 minutes to evaluate each of the four pits and complete a land judging card and homesite evaluation card for each. Four separate pits are evaluated in the following areas:

Land Part 1: Soil Factors – 45 points

- Part 1 of Land deals with determining the major factors affecting how the land can be used and making interpretations of the soil factors.
- Students will determine soil texture (surface and subsurface), depth of soil, slope, and erosion (wind & water).
- Based on their findings, they will interpret the permeability, surface runoff, and major factors that keep area out of Class 1.
- Students will determine the Land Capability Class.

Land Part 2: Recommended Land Treatments – 30 points

- Part 2 of Land deals with vegetative and mechanical conservation practices used to protect the soil and provide permanent protection.
- Students will determine vegetative treatments needed for the site.
- Students will determine mechanical treatments for the site.
- Students will determine fertilizer and soil amendments for the site.

Homesite Part 1: Land Factors – 27 points

- This section is designed to emphasize the importance of soils and their limitations for homesites. Students will evaluate factors affecting the suitability of the soil.
- Students will determine the features of the site – texture, permeability, depth of soil, slope, erosion, surface runoff, shrink-swell, water table, and flooding.

Homesite Part 2: Planned Use – 70 points

- Soil information can be used to predict potential problems associated with planned or existing homesites.
- Students will determine the degree of limitation each feature has on the foundations for buildings.
- Students will determine the degree of limitation each feature has on lawns and landscapes.
- Students will determine the degree of limitation each feature has on septic systems.
- Students will determine the degree of limitation each feature has on sewage lagoons.

Scoring

Activities	Points	Individual Points	Team Points
Land – Part 1*	180 (4 pits x 45 points)	180	540
Land – Part 2*	120 (4 pits x 30 points)	120	360
Homesite – Part 1*	108 (4 pits x 27 points)	108	324
Homesite – Part 2*	280 (4 pits x 70 points)	280	840
TOTAL		688	2,064

*denotes a hands-on practicum area

TIEBREAKERS

If ties occur, the following events will be used to determine award recipients:

TEAM

1. Homesite Part 2, Site 1
2. Homesite Part 2, Site 2
3. Homesite Part 2, Site 3

INDIVIDUAL

1. Homesite Part 2, Site 1
2. Homesite Part 2, Site 2
3. Homesite Part 2, Site 3

Awards

Awards will be presented to individuals and the first team based on their rankings at the CDE awards ceremony at the New Jersey State FFA Convention. Awards are sponsored by the New Jersey FFA Foundation, Inc., the New Jersey State FFA Association, and/or the National FFA Organization.

Individual

- Overall Medals
 - Medals – Top three individuals
- H.O. Sampson Certificates (hands-on practicum areas ONLY)
 - Certificate – Top five individuals

Team

- Banner Sponsored by the New Jersey FFA Association - 1st place

The top five Land Judging teams have the opportunity to represent New Jersey at the National Land Judging & Homesite Evaluation Contest in Oklahoma in April/May.

References

This list of references is not intended to be all-inclusive.

- *Introduction to Horticulture*. 3rd Edition, 2000.
 - Interstate Publishers, Inc. Danville, IL.
- *Introductory Horticulture*. 5th Edition, 1996.
 - Delmar Publishers, Inc. Albany, NY.
- *Ornamental Horticulture: Science, Operations and Management*. 2nd Edition, 1994. Delmar Publishers Inc., Albany, NY.
- www.landjudging.com
- *Soil Science and Management*. 4th Edition 2003. Delmar Publishers, Inc. Albany, NY.
- *Fundamental Soil Science*. 2006. Delmar Publishers, Inc. Albany, NY.
- CAERT Library Lessons – *Animal, Plant & Soil Science Library*
- *Land Judging in Oklahoma*
 - Oklahoma Cooperative Extension Service, Division of Agricultural Sciences and Natural Resources, Oklahoma State University

Request for Reasonable Accommodations

The New Jersey FFA Association is committed to providing equal access to our events and activities for all people. Use this form to request a reasonable accommodation or assistance at least 3 weeks before any state-level events: <https://form.jotform.com/NJFFA/accommodations-request>. A new form will need to be submitted for each event in which a reasonable accommodation is being requested. This information will be kept confidential and will be used only to process the request. Our staff will review the request upon receipt and contact the requestor with additional information. The association cannot guarantee accommodations or assistance if a form is received less than 3 weeks before an event. Accommodations being requested that require the assistance of another person (nurse, interpreter, scribe, reader, etc.) is the responsibility of the school/requestor. It is also the school/requestor's responsibility to provide any approved equipment to aid in the accommodation process, if applicable.

Land Judging and Related Careers

CAREER OPPORTUNITIES FOUND IN THE CAREER CLUSTERS

- Agricultural, Food & Natural Resources
 - Agronomist
 - Field Inspector
 - Producer
- Marketing
 - Field Sales Representative
- Science Technology, Engineering & Mathematics
 - Soil Scientist
- Education & Training
 - Soil Science Teacher
 - Farm Broadcaster
 - Editor/writer for a Geology Publication

SAE OPPORTUNITIES

- Conducting tests on crops in different soil types and making recommendations
- Employment at a farm that produces crops
- Field surveyor
- Soil conservation
- Experiment with erosion control methods.

EDUCATIONAL REQUIREMENTS/OPPORTUNITIES

- Associate degree and/or industry training
 - Producer
- Bachelor's degree
 - Agronomist
 - Field Sales Representative
 - Agricultural Extension Agent
- Graduate Degree
 - Soil Scientist
 - Postsecondary Educator
 - Editor/Writer

Land Form #601TX-3

Team #	Last Name	First Name
0		
1	A	A
2	B	B
3	C	C
4	D	D
5	E	E
6	F	F
7	G	G
8	H	H
9	I	I
	J	J
	K	K
	L	L
	M	M
	N	N
	O	O
	P	P
	Q	Q
	R	R
	S	S
	T	T
	U	U
	V	V
	W	W
	X	X
	Y	Y
	Z	Z

Code
0
1
2
3
4
5
6
7
8
9

Team Name / Additional Info

SURFACE TEXTURE		1	2	3	4
1 Coarse		1	2	3	4
2 Moderately Coarse		1	2	3	4
3 Medium		1	2	3	4
4 Moderately Fine		1	2	3	4
5 Fine		1	2	3	4
SUBSURFACE TEXTURE		1	2	3	4
1 Coarse		1	2	3	4
2 Moderately Coarse		1	2	3	4
3 Medium		1	2	3	4
4 Moderately Fine		1	2	3	4
5 Fine		1	2	3	4
DEPTH OF SOIL		1	2	3	4
1 Deep		1	2	3	4
2 Moderately Deep		1	2	3	4
3 Shallow		1	2	3	4
4 Very Shallow		1	2	3	4
SLOPE		1	2	3	4
1 Nearly Level		1	2	3	4
2 Gently Sloping		1	2	3	4
3 Moderately Sloping		1	2	3	4
4 Strong Sloping		1	2	3	4
5 Steep		1	2	3	4
6 Very Steep		1	2	3	4
EROSION - Wind & Water		1	2	3	4
1 None to Slight		1	2	3	4
2 Moderate		1	2	3	4
3 Severe		1	2	3	4
4 Very Severe		1	2	3	4
PERMEABILITY		1	2	3	4
1 Rapid		1	2	3	4
2 Moderate		1	2	3	4
3 Slow		1	2	3	4
4 Very Slow		1	2	3	4
SURFACE RUNOFF		1	2	3	4
1 Rapid		1	2	3	4
2 Moderate		1	2	3	4
3 Slow		1	2	3	4
4 Very Slow		1	2	3	4

VEGETATIVE LAND TREATMENTS		1	2	3	4
1 Row crop/occasional soil conserving crop		Y/N	Y/N	Y/N	Y/N
2 Row crop/frequent soil conserving crop		Y/N	Y/N	Y/N	Y/N
3 Row crops not more than 2 out of 4 years		Y/N	Y/N	Y/N	Y/N
4 Row crops not more than 1 out of 5 years		Y/N	Y/N	Y/N	Y/N
5 Return crop residue to the soil		Y/N	Y/N	Y/N	Y/N
6 Practice conservation tillage		Y/N	Y/N	Y/N	Y/N
7 Establish recommended grass or grasses and legumes		Y/N	Y/N	Y/N	Y/N
8 Proper pasture and range management		Y/N	Y/N	Y/N	Y/N
9 Protect from burning		Y/N	Y/N	Y/N	Y/N
10 Control grazing		Y/N	Y/N	Y/N	Y/N
11 Plant recommended trees		Y/N	Y/N	Y/N	Y/N
12 Harvest trees selectively		Y/N	Y/N	Y/N	Y/N
13 Use only for wildlife or recreation area		Y/N	Y/N	Y/N	Y/N
MECHANICAL LAND TREATMENTS		1	2	3	4
14 Control brush or trees		Y/N	Y/N	Y/N	Y/N
15 Terrace and farm on contour		Y/N	Y/N	Y/N	Y/N
16 Maintain terraces		Y/N	Y/N	Y/N	Y/N
17 Construct diversion terraces		Y/N	Y/N	Y/N	Y/N
18 Install drainage system		Y/N	Y/N	Y/N	Y/N
19 Control gullies		Y/N	Y/N	Y/N	Y/N
20 No mechanical treatment needed		Y/N	Y/N	Y/N	Y/N
FERTILIZER & SOIL AMENDMENTS		1	2	3	4
21 Soil amendments		Y/N	Y/N	Y/N	Y/N
22 Phosphorus (P)		Y/N	Y/N	Y/N	Y/N
23 Potassium (K)		Y/N	Y/N	Y/N	Y/N
24 Nitrogen (N)		Y/N	Y/N	Y/N	Y/N
25 No fertilizer or soil amendments		Y/N	Y/N	Y/N	Y/N

MAJOR FACTORS		1	2	3	4
1 Texture		Y/N	Y/N	Y/N	Y/N
2 Depth		Y/N	Y/N	Y/N	Y/N
3 Slope		Y/N	Y/N	Y/N	Y/N
4 Erosion		Y/N	Y/N	Y/N	Y/N
5 Permeability		Y/N	Y/N	Y/N	Y/N
6 Runoff		Y/N	Y/N	Y/N	Y/N
7 Wetness		Y/N	Y/N	Y/N	Y/N
8 Flooding		Y/N	Y/N	Y/N	Y/N
CAPABILITY CLASS		1	2	3	4
1 Class I		I	I	I	I
2 Class II		II	II	II	II
3 Class III		III	III	III	III
4 Class IV		IV	IV	IV	IV
5 Class V		V	V	V	V
6 Class VI		VI	VI	VI	VI
7 Class VII		VII	VII	VII	VII
8 Class VIII		VIII	VIII	VIII	VIII

