



NEW JERSEY FFA

CAREER AND LEADERSHIP
DEVELOPMENT EVENTS

Land Judging

2022

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 soils respond 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

This event will provide the participant with the ability 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-swell.

HOMESITE

- Determine if there is a flood hazard.
- Determine if drainage is a problem.
- Determine if soils have high shrink-swell 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

- Team make-up – Teams will consist of three or four members. Team ranking is determined by combining the scores of the top three individuals. The fourth member automatically becomes the team alternate.
- Official dress is not required for this event. Participants are encouraged to dress for the weather, including boots.
- No individuals from the same school/chapter may talk, confer or judge together. Penalty will be loss of score for that section of the event or disqualification for the event. Event coordinator has the authority to make disqualifications.
- 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, iPods, mp3 players, 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 by following the rules set forth by the event coordinator.

- No school/chapter will use Rutgers University or Delaware Valley University for the training of teams. **Penalty will be disqualification.**
- All events 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.
- A student may not compete in more than one event during FFA Career Development Events. A student cannot compete in more than one event at the National Competition each year. This includes public speaking, parliamentary procedure and all non-leadership team 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 the case of rain. Students may also wish to bring a knife/nail or a towel/rag.*

Materials provided by the CDE committee:

- All paper and other supplies

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 sites = 300 Points

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

- Both the homesite and land scorecard will be used at all four sites.
- Students will be given 20 minutes at each pit

FLOW OF EVENT

- Site 1 (Land & Homesite) – 20 minutes
- Site 2 (Land & Homesite) – 20 minutes
- Site 3 (Land & Homesite) – 20 minutes
- Site 4 (Land & Homesite) – 20 minutes

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 finds, 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 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.

TIEBRAKERS

If ties occur, the following events will be used in order 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

Scoring

Total Possible Individual Points – 688 points

Total Points per Team – 2064 points

**denotes a hands-on practicum area*

Land (4 pits)*

1. Part 1: Soil Factors (points vary/section) – 45 Points
2. Part 2: Recommended Land Treatments (points vary/section) – 30 Points
3. Total = 75 Points

Homesite (4 pits)*

1. Part 1: Land Factors (3 points each section) – 27 Points
2. Part 2: Planned Use (2 points each section) – 70 Points
3. Total = 97 Points

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 Association.

Individual

- Overall Medals
 - Medals – Top three individuals
- H.O. Sampson Certificates (hands-on sections 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

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

Code
0 0
1 1
2 2
3 3
4 4
5 5
6 6
7 7
8 8
9 9

Team Name / Additional Info

Part I	SURFACE TEXTURE	1	2	3	4	One answer per site	
	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		One answer per site
	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		One answer per site
	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	One answer per site		
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	One answer per site		
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	One answer per site		
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	One answer per site		
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)			

Part II	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)	

Part I (continued)	MAJOR FACTORS	1	2	3	4	One answer per site
	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)		

PIT 2									
Part 1: Land Factors			Part 2: Planned Use*						
TEXTURE SURFACE	Coarse M od Cree, Med, M od Fine Fine	Slight M oderate Severe	Foundations for Buildings	Lawns and Landscaping	Septic Systems	Sewage Lagoon	PERM EABILITY	Very Slow (<0.06"/hr.) Slow (0.06-0.6"/hr.) Moderate (0.6-2.0"/hr.) Rapid (>2.0"/hr.)	Slight Moderate Severe V. Severe
DEPTH OF S QL	V. Shallow (<10") Shallow (10-20") Mod. Deep (20-40") Deep (40-72") V. Deep over (72")	Slight M oderate Severe V. Severe							
SLOPE	N.L. to Gentle (0-3%) Moderate (3-5%) Strong (5-8%) Steep (8-15%) V. Steep (15%+)	Slight Moderate Severe							
EROSION	None-Slight-Moderate Severe Rapid	Slight Moderate Severe							
SURFACE RUNOFF	Slow Moderate Rapid	Slight Moderate Severe							
SHRINK - SWELL	Low Moderate High	Slight Moderate Severe							
WATER TABLE	Deep (>72") M od. Deep (40-72") Shallow (<40")	Slight M oderate Severe							
FLOOD-ING	None Occasional (<1 in 2 yrs.) Frequent (>1 in 2 yrs.)	Slight Moderate Severe							
FINAL EVALUATION	All factors none to slight One or more factors mod.; One or more factors severe; One or more factors very severe	Slight Moderate Severe V. Severe							
PIT 3									
Part 1: Land Factors			Part 2: Planned Use*						
TEXTURE SURFACE	Coarse M od Cree, Med, M od Fine Fine	Slight M oderate Severe	Foundations for Buildings	Lawns and Landscaping	Septic Systems	Sewage Lagoon	PERM EABILITY	Very Slow (<0.06"/hr.) Slow (0.06-0.6"/hr.) Moderate (0.6-2.0"/hr.) Rapid (>2.0"/hr.)	Slight Moderate Severe V. Severe
DEPTH OF S QL	V. Shallow (<10") Shallow (10-20") Mod. Deep (20-40") Deep (40-72") V. Deep over (72")	Slight M oderate Severe V. Severe							
SLOPE	N.L. to Gentle (0-3%) Moderate (3-5%) Strong (5-8%) Steep (8-15%) V. Steep (15%+)	Slight Moderate Severe							
EROSION	None-Slight-Moderate Severe Rapid	Slight Moderate Severe							
SURFACE RUNOFF	Slow Moderate Rapid	Slight Moderate Severe							
SHRINK - SWELL	Low Moderate High	Slight Moderate Severe							
WATER TABLE	Deep (>72") M od. Deep (40-72") Shallow (<40")	Slight M oderate Severe							
FLOOD-ING	None Occasional (<1 in 2 yrs.) Frequent (>1 in 2 yrs.)	Slight Moderate Severe							
FINAL EVALUATION	All factors none to slight One or more factors mod.; One or more factors severe; One or more factors very severe	Slight Moderate Severe V. Severe							

*Part 2: Planned Use - Family Dwelling Site Without Basement. Interpretations of Limitations in Terms of...