# LAND JUDGING AND HOMESITE EVALUATION IN FLORIDA

A workshop for 4-H

Land Judging Workshop 01-27-2010

### Who am I?

Pedology Professor at UF IFAS rep and guide for Landjudging rexellis@ufl.edu

LORID

What is it? Local and State contest about making wise landuse decisions Who is it? Middle and High School (both FFA and 4-H) Who oversees it? State Land Judging Committee Who guides it? UF IFAS (Herbert → Brown → Ellis) More info? <u>http://landjudging.ifas.ufl.edu</u> (Edit: website changed to <u>http://landjudging.org</u> in February 2013)

ORID

## My Goal for Today

- I want you to get excited about soils
- I want your students to get excited too.
- I want to see you and your students at the next state land judging contest!

## How do you get to state?

- Win your county. That's it!
- In some counties, there is NO land judging contest because one or less teams want one.
- Under these circumstances, we currently permit ANY team from that county to go DIRECTLY to the state contest, provided they participate in a local contest in some other county.

## You can go to state this YEAR!

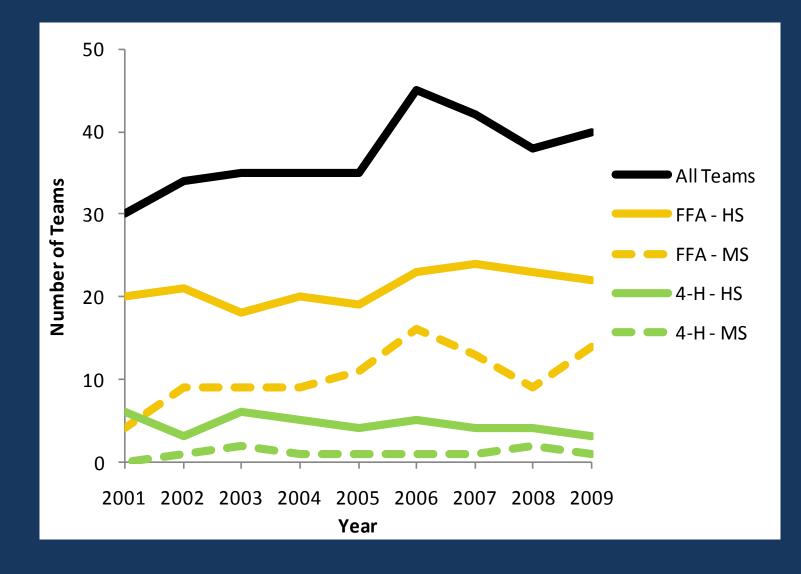
- If your county has NO 4-H team participating in land judging, then you can put together a team and attend neighboring local contest.
- Document your participation at the local level, then register for state!
- See you soon I hope.

## You can go to nationals

- The FFA and 4-H winners of the state contest go to Nationals.
- It is a great experience.
- Do you want to go to the national contest?

Put together a 4-H team today!

## Participation









### Annual State of Florida 4H / FFA Land Judging Contest Information

Revised Training Material

Policy Statement (revised June 2006)

Past Contest Results

Future Contest Sites

Important

Scorecard Grading Policy

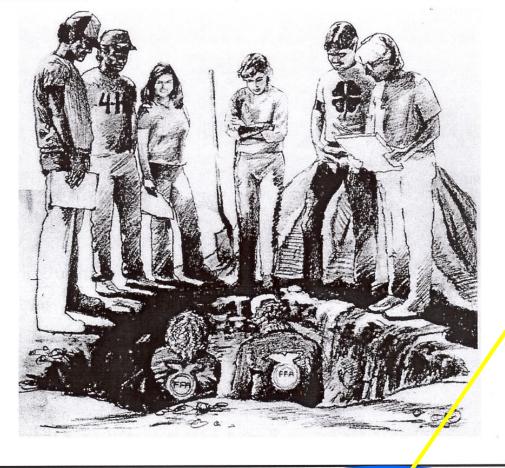


http://landjudging.ifas.ufl.edu/ **Training Material Click Picture to Download Download PDF** 



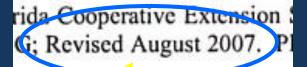
### Land Judging and Homesite Evaluation in Florida<sup>1</sup>

J.H. Herbert, Jr., R.B. Brown and E.A. Hanlon, Jr.<sup>2</sup>



- This document is CIR242, a circular developed by the Soil and Water Science Department, Florida Cooperative Extension Service Institute of Food and Agricultural Sciences, University of Florida. First published August 1985 a CIR 242-G; Revised August 2007. Please visit the EDIS Website at http://edis.ifas.ufl.edu.
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**CIR 242** 

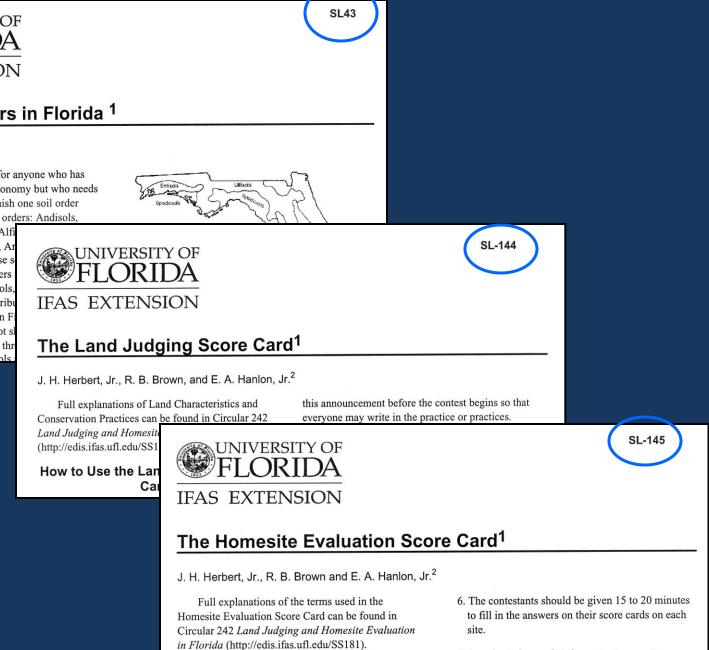


### Key to Soil Orders in Florida <sup>1</sup>

#### M.E. Collins<sup>2</sup>

This fact sheet is intended for anyone who has some understanding of Soil Taxonomy but who needs a simplified key to help distinguish one soil order from another. There are 12 soil orders: Andisols,

Gelosols, Entisols, Inceptisols, Alfi Spodosols, Histosols, Mollisols, Ar and Oxisols. Only seven of these s present in Florida. The soil orders Florida are the Aridisols, Vertisols, Gelosols, and Oxisols. The distribu soil orders in Florida is shown in F Inceptisols, and Mollisols are not sl Alfisols are widely interspersed thr and the aerial extent of Inceptisols.



How to Use the Homesite Evaluation Score Card  In order to insure that the contests are not lengthened too much by the addition of homesite evaluation, and that grading does not become too burdencome several alternatives are possible; for

#### 

#### HOMESITE EVALUATION SCORE CARD

#### Indicate your answer by an X in the $\square$

| LAND CHARACTERISTICS - PART ONE<br>SURFACE TEXTURE |
|----------------------------------------------------|
| Sandy                                              |
|                                                    |
|                                                    |
| (Organic)                                          |
| ORGANIC MATTER (SURFACE SOIL)                      |
| High                                               |
| Medium.                                            |
|                                                    |
| Low                                                |
| Thin                                               |
| Thick                                              |
| Very Thick                                         |
|                                                    |
| SOIL (PERMEABILITY)                                |
| Rapid                                              |
| Moderate                                           |
|                                                    |
| SLOPE                                              |
| A Nearly level                                     |
| C Moderately sloping.                              |
| D Strongly sloping                                 |
| E Steep.                                           |
| F Very steep                                       |
| EROSION - WIND AND WATER                           |
|                                                    |
| None to slight                                     |
| None to slight                                     |
| Moderate                                           |
| Moderate            Severe            Very severe  |
| Moderate                                           |

| ver by an X in the 🗆                                                                                                                                                                                     |                  |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------|
| CONSERVATION PRACTICES - PART TWO<br>VEGETATIVE<br>Use soil conserving and improving crops:<br>1. Every year between cash crops.<br>2. Every other year.                                                 |                  |       |
| <ul> <li>A. Two years out of three.</li> <li>A. Three years out of four.</li> </ul>                                                                                                                      |                  |       |
| <ul> <li>5. Contour strip cropping.</li> <li>6. Manage crop residue.</li> </ul>                                                                                                                          |                  |       |
| <ul> <li>7. Use sod-based rotation.</li> <li>8. Wind strip cropping.</li> <li>9. Use field windbreaks.</li> <li>10. Control noxious plants.</li> <li>11. Establish recommended grasses and/or</li> </ul> |                  |       |
| legumes.<br>☐ 12. Manage pasture or range properly.<br>☐ 13. Protect from wildfire.<br>☐ 14. Plant recommended trees.                                                                                    |                  |       |
| <ul> <li>15. Harvest trees selectively.</li> <li>16. Use for wildlife or recreational area.</li> <li>17</li></ul>                                                                                        |                  |       |
| MECHANICAL<br>18. Terrace.<br>19. Farm on the contour.<br>20. Maintain terraces.                                                                                                                         |                  |       |
| <ul> <li>21. Construct diversion terraces.</li> <li>22. Develop waterways.</li> <li>23. Install water control system.</li> <li>24. Control gullies.</li> <li>25. Subsoil.</li> <li>26</li></ul>          |                  |       |
| FERTILIZER & SOIL AMENDMENTS                                                                                                                                                                             |                  |       |
| <ul> <li>28. Nitrogen.</li> <li>29. Phosphorus.</li> <li>30. Potassium.</li> <li>31. One micronutrient.</li> </ul>                                                                                       |                  |       |
| <ul> <li>□ 32. Two or more micronutrients.</li> <li>□ 33</li></ul>                                                                                                                                       |                  |       |
| SCORE PART I                                                                                                                                                                                             |                  |       |
| SCORE PART II                                                                                                                                                                                            |                  | I     |
| TOTAL SCORE                                                                                                                                                                                              |                  |       |
|                                                                                                                                                                                                          | sion S<br>cultur | al Sc |

| Site No                                                                                                   |                                           |                   |                           |                |  |  |  |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------|---------------------------|----------------|--|--|--|--|--|--|--|
|                                                                                                           | Indicate yo                               | ur answer by an X |                           |                |  |  |  |  |  |  |  |
|                                                                                                           | PART TWO                                  | PLANNED           | USE AND INTERPR           | RETATION       |  |  |  |  |  |  |  |
|                                                                                                           | Degree of<br>Limitation                   | Foundations       | Lawns, Shrubs,<br>Gardens | Septic Systems |  |  |  |  |  |  |  |
|                                                                                                           | Slight<br>Moderate<br>Severe<br>V. Severe |                   |                           |                |  |  |  |  |  |  |  |
|                                                                                                           | Slight<br>Moderate<br>Severe<br>V. Severe |                   |                           |                |  |  |  |  |  |  |  |
|                                                                                                           | Slight<br>Moderate<br>Severe<br>V. Severe |                   |                           |                |  |  |  |  |  |  |  |
|                                                                                                           | Slight<br>Moderate<br>Severe<br>V. Severe |                   |                           |                |  |  |  |  |  |  |  |
|                                                                                                           | Slight<br>Moderate<br>Severe<br>V. Severe |                   |                           |                |  |  |  |  |  |  |  |
|                                                                                                           | Slight<br>Moderate<br>Severe<br>V. Severe |                   |                           |                |  |  |  |  |  |  |  |
|                                                                                                           | Slight<br>Moderate<br>Severe<br>V. Severe |                   |                           |                |  |  |  |  |  |  |  |
|                                                                                                           | Slight<br>Moderate<br>Severe<br>V. Severe |                   |                           |                |  |  |  |  |  |  |  |
|                                                                                                           | Slight<br>Moderate<br>Severe<br>V. Severe |                   |                           |                |  |  |  |  |  |  |  |
| sion Service     SCORE PART ONE       cultural Sciences     SCORE PART TWO       resville     TOTAL SCORE |                                           |                   |                           |                |  |  |  |  |  |  |  |

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Florida Cooperative Extension Service/Institute of Food and Agricultural Sciences/University of Florida, Gainesville









#### LAND JUDGING SCORE CARD

Name . . . .

LAND CHARACTERISTICS SUBEACE TEXTURE

Indicate your answer by an X in the  $\Box$ 

### OONIGEDVAT

| SOULAGE LEXIONE                  |
|----------------------------------|
| Sandy                            |
|                                  |
| (Organic)                        |
| ORGANIC MATTER (SURFACE SOIL)    |
| High                             |
| Medium                           |
| Low                              |
| THICKNESS OF ROOTING ZONE        |
| Thin                             |
| Thick $\ldots$                   |
| Very Thick                       |
| MOVEMENT OF AIR AND WATER IN THE |
| SOIL (PERMEABILITY)              |
| Rapid                            |
| Moderate                         |
| Slow                             |
| SLOPE                            |
| A Nearly level                   |
| B Gently sloping                 |
| C Moderately sloping             |
| E Steep.                         |
| F Very steep                     |
| EROSION - WIND AND WATER         |
| None to slight                   |
| Moderate                         |
| Severe                           |
| Very severe                      |
| DRAINAGE                         |
| Poor                             |
| Somewhat poor                    |
| Moderately well or well          |
| Excessive                        |
| FACTORS DETERMINING LAND CLASS   |
| Texture                          |
| Organic matter                   |
| Thickness of rooting zone        |
| Permeability                     |
| Slope                            |
|                                  |
| Drainage                         |
|                                  |
| Circle one of the above          |
| SOIL ORDER                       |
| Alfisol                          |
| Aridisol                         |
| Entisol                          |
| Histosol                         |
| Inceptisol Vertisol              |

| CONSERVATION PRACTICES - PART TWO                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Use soil conserving and improving crops.                                                                                                                                                |
| <ul> <li>1. Every year between cash crops.</li> <li>2. Every other year.</li> </ul>                                                                                                     |
| <ul> <li>3. Two years out of three.</li> <li>4. Three years out of four.</li> </ul>                                                                                                     |
|                                                                                                                                                                                         |
| <ul> <li>5. Contour strip cropping.</li> <li>6. Manage crop residue.</li> </ul>                                                                                                         |
| <ul> <li>G. Manage crop residue.</li> <li>7. Use sod-based rotation.</li> <li>8. Wind strip cropping.</li> <li>9. Use field windbreaks.</li> <li>10. Control noxious plants.</li> </ul> |
| <ul> <li>9. Use field windbreaks.</li> </ul>                                                                                                                                            |
| <ul> <li>10. Control noxious plants.</li> <li>11. Establish recommended grasses and/or</li> </ul>                                                                                       |
| legumes.<br>12. Manage pasture or range properly.                                                                                                                                       |
| □ 13. Protect from wildfire.                                                                                                                                                            |
| <ul> <li>14. Plant recommended trees.</li> <li>15. Harvest trees selectively.</li> </ul>                                                                                                |
| □ 16. Use for wildlife or recreational area.                                                                                                                                            |
|                                                                                                                                                                                         |
| MECHANICAL                                                                                                                                                                              |
| □ 19. Farm on the contour.                                                                                                                                                              |
| <ul> <li>20. Maintain terraces.</li> <li>21. Construct diversion terraces.</li> </ul>                                                                                                   |
| <ul> <li>21. Construct diversion terraces.</li> <li>22. Develop waterways.</li> </ul>                                                                                                   |
| <ul> <li>23. Install water control system.</li> <li>24. Control gullies.</li> </ul>                                                                                                     |
| □ 24. Control guilles.<br>□ 25. Subsoil.                                                                                                                                                |
| □ 26                                                                                                                                                                                    |
| FERTILIZER & SOIL AMENDMENTS                                                                                                                                                            |
| 27. Lime.<br>28. Nitrogen.                                                                                                                                                              |
|                                                                                                                                                                                         |

29. Phosphorus. □ 30. Potassium. 31. One micronutrient. □ 32. Two or more micronutrients. 

| SCORE PART I  | X | • | • | • | • | • | • | e | • | 2 |
|---------------|---|---|---|---|---|---|---|---|---|---|
| SCORE PART II |   |   | 2 | • | • | • |   |   | • | 2 |
| TOTAL SCORE   | • | • |   |   |   | • | • | • |   |   |

### Soil Texture:

How do you determine texture? Feel the soil. Practice with known samples.

### Slope:

How do you determine slope? Walk many slopes and calibrate yourself.

### Water Table:

How do you determine depth to seasonal high water table? Redox concentrations in sand, redox depletions in loam/clay

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#### 

#### Indicate your answer by an X in the $\Box$

| SURFACE TEXTURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sandy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Loamy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Clayey                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| (Organic)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| ORGANIC MATTER (SURFACE SOIL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Medium.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Thick                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Very Thick                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| MOVEMENT OF AIR AND WATER IN THE                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| SOIL (PERMEABILITY)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Rapid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Moderate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Slow                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| SLOPE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| A Nearly level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| B Gently sloping                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| C Moderately sloping                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| D Strongly sloping                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| E Steep                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| F Very steep                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| EROSION - WIND AND WATER                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| None to slight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| None to slight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| None to slight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| None to slight           Moderate           Severe           Very severe                                                                                                                                                                                                                                                                                                                                                                                                                              |
| None to slight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| None to slight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| None to slight.          Moderate.          Severe.          Very severe          DRAINAGE          Poor          Somewhat poor.                                                                                                                                                                                                                                                                                                                                                                      |
| None to slight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| None to slight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| None to slight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| None to slight.          Moderate.          Severe.          Very severe          DRAINAGE          Poor          Somewhat poor.          Moderately well or well          Excessive          FACTORS DETERMINING LAND CLASS         Texture.                                                                                                                                                                                                                                                         |
| None to slight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| None to slight.          Moderate.          Severe.          Very severe          DRAINAGE          Poor          Somewhat poor.          Moderately well or well          Excessive          FACTORS DETERMINING LAND CLASS         Texture.          Organic matter          Thickness of rooting zone.          Permeability.          Slope          LAND CAPABILITY CLASS         I       III         III       IV         V       VI       VII         Circle one of the above       SOIL ORDER |
| None to slight.          Moderate.          Severe.          Very severe          DRAINAGE          Poor          Somewhat poor.          Moderately well or well          Excessive          FACTORS DETERMINING LAND CLASS         Texture          Organic matter          Thickness of rooting zone          Slope          Erosion          Drainage          LAND CAPABILITY CLASS         I       III         Circle one of the above         SOIL ORDER         Alfisol                       |
| None to slight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| None to slight.          Moderate.          Severe.          Very severe          DRAINAGE          Poor          Somewhat poor.          Moderately well or well          Excessive          FACTORS DETERMINING LAND CLASS         Texture          Organic matter          Thickness of rooting zone          Slope          Erosion          Drainage          LAND CAPABILITY CLASS         I       III         Circle one of the above         SOIL ORDER         Alfisol                       |

#### CONSERVATION PRACTICES - PART TWO VEGETATIVE

Use soil conserving and improving crops:

- 1. Every year between cash crops.
- 2. Every other year.
- 3. Two years out of three.
- 4. Three years out of four.  $\square$
- 5. Contour strip cropping.
- 6. Manage crop residue.
- □ 7. Use sod-based rotation.
- 8. Wind strip cropping.
- 9. Use field windbreaks.
- □ 10. Control noxious plants.
- □ 11. Establish recommended grasses and/or legumes.
- □ 12. Manage pasture or range properly.
- □ 13. Protect from wildfire.
- 14. Plant recommended trees.
- □ 15. Harvest trees selectively.
- □ 16. Use for wildlife or recreational area.

#### MECHANICAL

- □ 18. Terrace. □ 19. Farm on the contour.
- □ 20. Maintain terraces.
- □ 21. Construct diversion terraces.
- □ 22. Develop waterways.
- 23. Install water control system.
- □ 24. Control gullies.
- □ 25. Subsoil.

FERTILIZER & SOIL AMENDMENTS □ 27. Lime. 28. Nitrogen. 29. Phosphorus. □ 30. Potassium. 31. One micronutrient. □ 32. Two or more micronutrients. 

| SCORE PART I . | • | • | • | • |   | e | • |   |  |
|----------------|---|---|---|---|---|---|---|---|--|
| SCORE PART II. |   | • |   |   | • |   | • | • |  |
| TOTAL SCORE .  |   |   |   |   |   |   |   |   |  |

### Everything else is memorization and execution.

## Winning Teams...

In order of importance:

- 1. Know the book, front to back, in and out. They have it memorized <sup>(3)</sup>
- 2. Walk LOTS of slopes. They can feel the slope just by walking it.
- 3. Call water tables correctly.
- 4. Know their soil textures.

In the field today we will focus on #3. It is the single most poorly understood part of the contest.

## What will we do today?

- Visit some soil pits. Soil pits are the way we observe the land properties.
- At a pit, we will work through the score card to get a feel for what students will experience.
- Answer any questions you may have about the contest.
- Have fun and learn.