

Effective August 1, 2004

#### Purpose

The rural soils judging CDE is an educational activity designed as a practical method of teaching students to evaluate land and soil to determine its greatest safe potential use.

#### Date

Fall: District set by districts at least 10 days prior to state CDE

State CDE dates set annually by the Agricultural Education Service

#### Location

District: Set annually by the respective district.

State: Set annually by the Agricultural Education Service.

#### CDE Rules

**NEW FOR 2005-2006 SCHOOL YEAR!!! The top 5 individuals from each district will participate at the state level, even if their teams do not make the top 5 team cut, you must contact the coordinator and give them the results for your district.**

1. Each district may decide how many teams and how many individuals per team may participate in the district CDE.

2. Only one team from a school may participate in the state CDE . The top five teams from each district may compete in the state contest. However, only one team from any one school may participate in the state contest. If one of the top five schools in the district can not participate it is their responsibility to contact the next team in line so that they may participate in the state CDE.

3. A team, at the state CDE, shall consist of four individuals, with the top 3 scores making up the team score

4. Three or four soil sites are selected in advance of the CDE day. These sites should be chosen to show soil

## RURAL SOILS RULES

conditions that affect rural uses, and should be located within easy walking distance of each other. By locating each pit near the center of a uniform area, the site can be judged as an area on which the slope and other soil properties can be determined. Care should be taken to select sites where clear-cut decisions can be made relative to the correct marking of all sections of the score-card. Avoid "borderline" conditions if at all possible.

5. A pit is dug for each representative site. Each pit should be dug at least 60 inches deep. The pit should be of sufficient length to accommodate multiple contestants. One side of the pit should be perpendicular and located so it will receive the direct rays of the sun, insofar as possible.

6. A time limit of 15-20 minutes is sufficient for each group to use in judging one soil site. At the end of the prescribed time limit, a signal is given. The procedure is continued until each group of contestants has had a chance to judge each of the sites.

7. The area to be used in determining slope should be marked with stakes.

8. Students should bring their own clipboard, digging tool, water bottle, yardstick, slope board and two #2 lead pencils. There should be a gallon of water at each pit.

#### CDE Format

1. Three or four soil pits and surrounding areas are evaluated on the following basis:

- a. slope
- b. erosion or depth of topsoil
- c. texture of surface soil
- d. depth of soil
- e. natural drainage class of the soil
- f. land class determination
- g. best land use determination
- h. recommended conservation practices

2. Up to 25-question written examination will be taken. District officials are to prepare the test for their district CDE. Soil survey questions will

Effective August 1, 2004

## RURAL SOILS RULES

be at a separate site.

### Scoring Guide

#### 1. Individual (possible score)

Part 1: 10 points per column, only one mark per column 50 points

Part 2: 10 points for correct marking 10 points

Part 3: 20 points for correct marking 20 points

Part 4: 4 points per practice x 12 possible practices 48 points

Total Possible 128 points

Written test 15 questions 60 points

Soil Survey 15 questions 40 points

128 points per site x 4 sites = 512 points

Total Possible 612 Points

#### 2. Team

612 points x 3 individuals = 1836 Total Possible Points

3. Tied team scores will be broken based on the following criteria:

First criteria:

Part I. total points on all pits

Second criteria: Written test

Third criteria: Soil Survey

4. Tied individual scores will be broken based on the following criteria:

First criteria:

Part I. Total points on all pits

Second criteria: Written test

Third criteria: Soil Survey

### References

The following references are available from the Ohio Agricultural Education Curriculum Materials Service at The Ohio State

University:

1. Judging Land and Soil for Agricultural Use (August 1990)

2. Know Your Land

3. Ohio Land and Soil Conservation Judging

Scorecard (August 1990)

#### 4. Soil and Its Properties

Examples of Agricultural Related Soil Survey Report Questions for State FFA Agricultural Land

Judging CDE (Using Franklin County, Ohio Soil Survey)

(Mark the correct answer.)

1. How many acres of Kokomo silty clay loam are in Franklin County?

\_\_\_\_\_ a) 7,700

\_\_\_\_\_ b) 36,442

\_\_\_\_\_ c) 360

\_\_\_\_\_ d) 1,803

2. What corn yield would you expect on Kokomo silty clay loam?

\_\_\_\_\_ a) 135 bu

\_\_\_\_\_ b) 100 bu

\_\_\_\_\_ c) 180 bu

\_\_\_\_\_ d) 220 bu

3. What is the depth to bedrock in Milton soils?

\_\_\_\_\_ a) Deep

\_\_\_\_\_ b) Moderately deep

\_\_\_\_\_ c) Shallow

\_\_\_\_\_ d) Very shallow

4. What is the available water capacity of Pewamo silty clay loam?

\_\_\_\_\_ a) Low

\_\_\_\_\_ b) Moderate

\_\_\_\_\_ c) High

\_\_\_\_\_ d) Very high

5. What is the land capability classification of Miamian clay loam, 6 to 12 percent slopes, severely eroded?

\_\_\_\_\_ a) IIIe

\_\_\_\_\_ b) VIe

\_\_\_\_\_ c) IIe

\_\_\_\_\_ d) IVe

6. What is the suitability of Miamian clay loam, 6 to 12 percent slopes, severely eroded for crops?

\_\_\_\_\_ a) Very poorly

\_\_\_\_\_ b) Poorly

\_\_\_\_\_ c) Well suited

\_\_\_\_\_ d) Unsited

7. What is the depth of mottling in the typical Medway silt loam, occasionally flooded soil?

\_\_\_\_\_ a) 21 inches

\_\_\_\_\_ b) 16 inches

\_\_\_\_\_ c) 32 inches

\_\_\_\_\_ d) 40 inches

8. What is the permeability of Miamian soils?

\_\_\_\_\_ a) Slow

\_\_\_\_\_ b) Moderate

Effective August 1, 2004

## RURAL SOILS RULES

- \_\_\_\_\_ c) Moderately slow
- \_\_\_\_\_ d) Rapid

9. What soils were included in mapping the Eldean silt loam, 2 to 6 percent slopes map unit?

- \_\_\_\_\_ a) Miamian, Crosby and Lewisburg
- \_\_\_\_\_ b) Sloan, Ross and Genesee
- \_\_\_\_\_ c) Ockley, Sleeth and Westland
- \_\_\_\_\_ d) Kendallville and Crosby

10. What is the drainage class of Pewamo silty clay loam?

- \_\_\_\_\_ a) Well drained
- \_\_\_\_\_ b) Moderately well drained
- \_\_\_\_\_ c) Somewhat poorly drained
- \_\_\_\_\_ d) Very poorly drained

Answers to Agricultural Related Questions

(All answers are in the Franklin County, Ohio Soil Survey)

### ANSWER LOCATION IN SOIL SURVEY

- 1. b) (36,442 acres) From table 4 on page 123.
- 2. a) (135 bushels) From table 5 on page 126.
- 3. b) (Moderately deep) Milton series page 97. Also first sentence of MoB and MoC2 map unit descriptions on pages 48 and 49.
- 4. c) (High) 4th paragraph of Pewamo silty clay loam (Pm) map unit on page 53.
- 5. d) (IVe) Next to last line of MmC3 map unit description on page 47.
- 6. b) (Poorly suited) 1st line of 6th paragraph of MmC3 map unit description on page 47.
- 7. a) (21 inches) Second paragraph of Mh map unit description on page 43.
- 8. c) (Moderately slow) 4th paragraph of MkB, M1B2 and M1C2 map unit descriptions on pages 43,44 and 45. Also second line of 1st paragraph of Miamian series on page 97.
- 9. c) (Ockley, Sleeth and Westland) Third paragraph of E1B map unit on page 32.
- 10. d) (Very poorly drained) Second line of Pm map unit description on page 53. Also 1st line of Pewamo series description on page 100