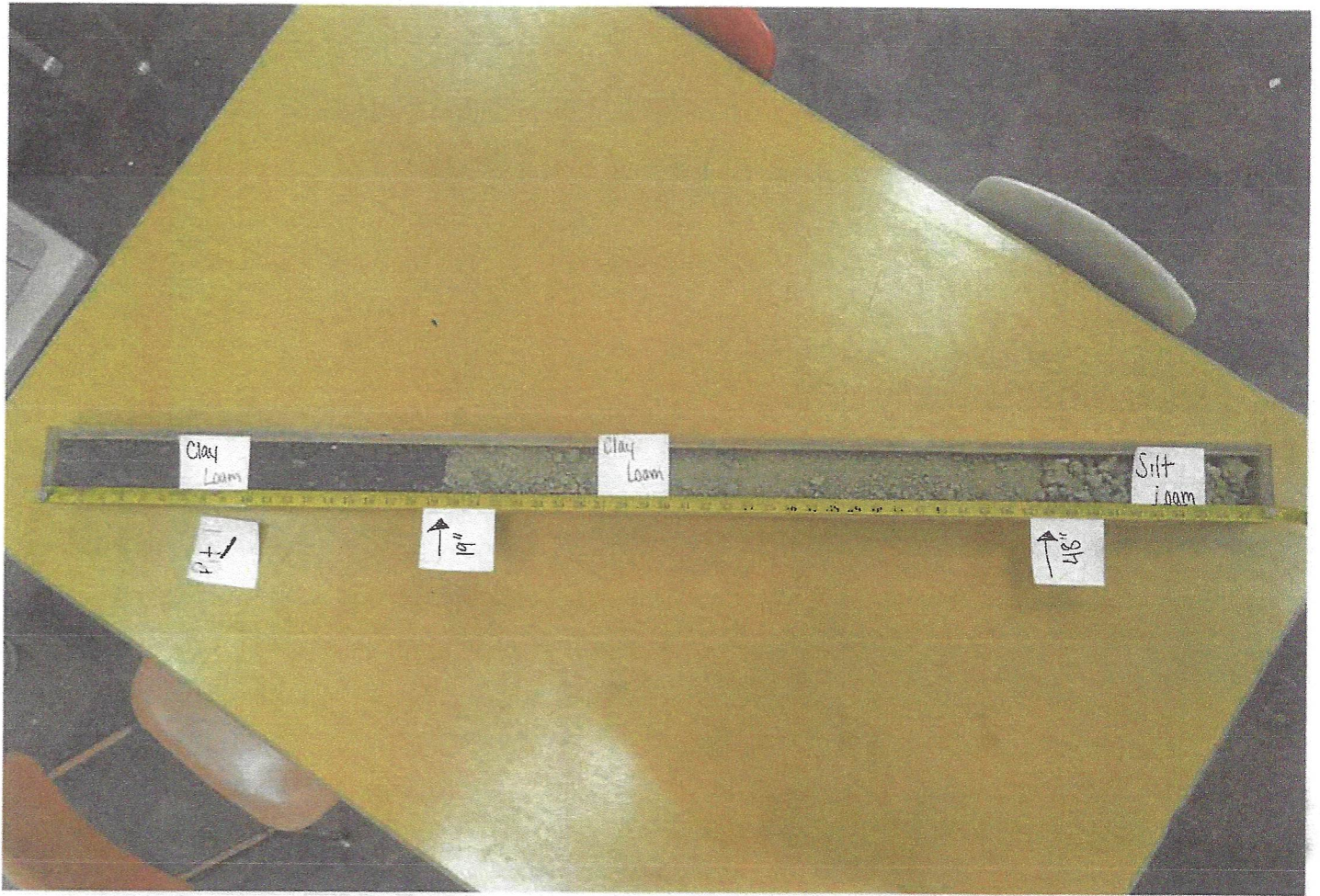


①



#1

FFA LAND JUDGING PLACARD - MINNESOTA - FFA

Pit Number Pit #1
Lime Area 1 Flooding Annually - No Outlet
pH 6.5 SMP Buffer Index 5 Assumed Field Size 150 Acres
P Test 11 lb./acres available phosphorus
Subsoil Phosphorus Level _____
K Test 40 lb./acres exchangeable potassium
Subsoil Potassium Level _____ Manure Applied None Tons/Acre
Corn Yield Goal _____ bu./acres
Crop to be planted Soybeans
Past Crop CORN
Original Surface Soil Depth 15 inches
Slope Length 50 feet
Depth to permanent water table 30 inches
Moderate Rain Fall

Zero Slope Rise

No gravel in any of the three layers

P.H.

Name Official Minnesota FFA Soils Scorecard

School _____

Number _____

2/06

Part 1 Surface Soil - A. Thickness in inches

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

2

19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

B. Color

(Allow 1 inch either way on thickness)

4

Dark

Medium

Light

C. Texture

5

Coarse

Moderately Coarse

Medium

Fine

Very Fine

D. Gravel and Rock

2

None to Few

Gravelly

Very Gravelly

Extremely Gravelly

Part 2 Subsurface Soil - A. Thickness in inches

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

2

19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

B. Color

(Allow 1 inch either way on thickness)

4

Bright

Mottled

Dull

C. Texture

5

Coarse

Moderately Coarse

Medium

Fine

Very Fine

D. Gravel and Rock

2

None to Few

Gravelly

Very Gravelly

Extremely Gravelly

Part 3 Parent material - A. Thickness in inches

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

2

19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

(Allow 1 inch either way on thickness)

Part 3 Parent material - Continued

B. Texture

Coarse

Moderately Coarse

Medium

Fine

Very Fine

C. Gravel and Rock

2

None to Few

Gravelly

Very Gravelly

Extremely Gravelly

Part 4 A. Steepness of Slope

3

Nearly level - 2 or less %

Gently sloping 3 - 6 %

Moderately sloping 7 - 12 %

Strongly sloping 13 - 18 %

Steep - > 18 %

B. Topography

3

Upland

Terrace - Footslope

Bottomland - Flood Plains

Depressional Area - No outlet

Part 5 - Land Capability Classification

6

Class I

Class II

Class III

Class IV

Class V

Class VI

Class VII

Class VIII

Land Suitable for
Cultivated Crops

Land Suitable for
Permanent
Vegetation

Score 6 points for
correct answer - 3 points
for 1 class off except for
class 5.

Part 6 Interpretation of Soil Features

A. Type of Material that Limits Depth

2

None-No limiting materials

Bedrock-Soft or hard

Hardpan-Cemented

Very gravelly sand or high water table

B. Parent Material

2

Bedrock-Hard or soft

Alluvium/Outwash/Lacustrine

Till/Loess/Aeolian Sand

Organic materials-Peat or muck

C. Depth Favorable

2

Very deep - 60 inches or more

Deep - 40 through 59 inches

Moderately Deep - 20 through 39 inches

Shallow - less than 20 inches

D. Air and Water Movement (Subsoil Permeability)

2

Very rapid

Rapid

Moderate

Slow

Pit 1

Part 1 - Available Water Capacity

1. Available water in horizon per inch of soil

1	0.05	Surface Horizon	Calculation Area $0.2 \times 19 = 3.8$
	0.15		
	0.20		
1	0.05	b. Subsoil	$0.2 \times 11 = 2.2$
	0.15		
	0.20		
1	0.05	c. Underlying material	0.2×0
	0.15		
	0.20		

2. Available water capacity per horizon

1	a. Surface horizon	0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	5.1-6.0	7.1-8.0	8.1 or >
1	b. Subsoil	0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	5.1-6.0	7.1-8.0	8.1 or >
1	c. Underlying material	0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	5.1-6.0	7.1-8.0	8.1 or >

3. Total available water capacity in five feet of soil

4 ☐ Very low Less than 3 inches

4 ☒ Low 3.0 - 6.0 inches

☐ Moderate 6.1 - 9.0 inches

☐ High - over 9.0 inches

4. Internal Drainage

4 ☐ Well drained

☐ Moderately well drained

☒ Somewhat poorly drained

☐ Poorly or very poorly drained

Part 7 - Accelerated Erosion

A. Amount of erosion

2 ☐ No erosion evident (less than 2")

☒ Deposition (2" or greater)

☐ Erosion present (2" or greater)

B. Kind of erosion

2 ☐ None

☐ Active gully

☐ Wind erosion

☐ Sheet or rill

Part 8 - Need for Erosion Control

A. Water Erosion

3 ☐ None to slight

☐ Crop cover, sodcover & conservation tillage

☐ Contour, strip crop and conservation tillage

☐ Grass waterway & gully control

☐ Woodland or permanent pasture

☐ Wildlife or recreation

B. Wind Erosion

3 ☐ None to Slight

☐ Mulch tillage, cover crops & field windbreak

Part 9 Drainage Required

5 ☐ Surface and/or tile

☐ None required

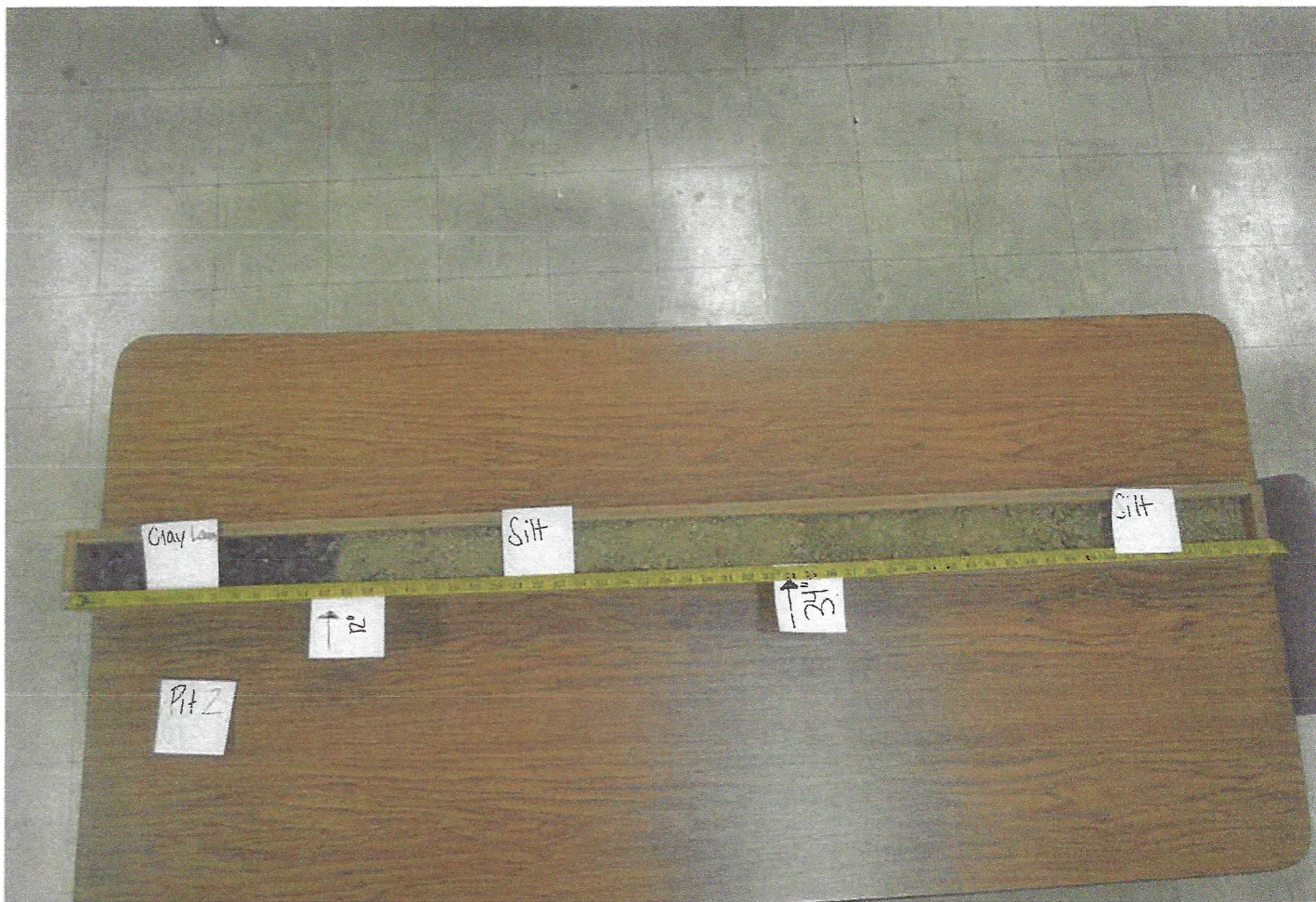
Part 10 Fertilizer and Lime Recommendations

Record recommended fertilizer application rates

2	0	Nitrogen pounds per acre
2	60	Phosphorous pounds per acre
2	80	Potassium pounds per acre
2	0	Lime pounds per acre

Part 11 - Land-use Limitations (Points are for each section)

Use	Limitation (3 pts)	% Slope (1 pt)	Surface Soil Texture (1 pt)	Flooding (1 pt)	Internal Drainage Class (1 pt)	Permeability Class (1 pt)	Depth to Bedrock (inches) (1 pt)	Subsoil or Underlying Materials (Shrink Swell Potential) (1 pt)
9 Dwellings (lawns), foundations, basements	☐ Slight	☒ 0-6	☐ medium, moderate coarse	☐ none	☐ well drained, mod. well drained		☒ more than 60	☐ coarse, mod. coarse, medium
	☐ moderate	☐ 6.1-12	☒ coarse, fine, very fine				☐ 40-60	☒ fine texture
	☒ severe	☐ more than 12		☒ any flooding	☒ somewhat poorly drained, poorly drained		☐ less than 40	☐ very fine texture
8 Septic tank absorption fields	☐ Slight	☒ 0-6		☐ none	☐ well drained, moderately well drained	☐ very rapid, rapid	☒ more than 60	
	☐ moderate	☐ 6.1-12				☒ moderately slow to mod rapid	☐ 40-60	
	☒ severe	☐ more than 12		☒ any flooding	☒ somewhat poorly, poorly drained	☐ slow to very slow	☐ less than 40	
8 Farm lagoons and holding basins	☐ slight	☒ 0-2		☐ None	☐ well drained moderately well drained	☐ slow	☒ more than 60	
	☐ moderate	☐ 2.1-6			☒ somewhat poorly drained	☒ moderately slow to mod rapid	☐ 40-60	
	☒ Severe	☐ more than 6		☒ any flooding	☐ poorly drained	☐ very rapid, rapid	☐ less than 40	



#2

FFA LAND JUDGING PLACARD - MINNESOTA - FFA

Pit Number Pit 2
Lime Area 2 Flooding None
pH 5.8 SMP Buffer Index 6.4 Assumed Field Size 200 Acres
P Test 50 lb./acres available phosphorus
Subsoil Phosphorus Level High
K Test 35 lb./acres exchangeable potassium
Subsoil Potassium Level low Manure Applied None Tons/Acre
Corn Yield Goal — bu./acres
Crop to be planted Managed Wood lots
Past Crop Managed Wood lots
Original Surface Soil Depth 13 inches
Slope Length 200 feet
Depth to permanent water table 20 Feet
Moderate Rainfall

ONE Foot slope rise

No gravel in any of the three layers

Dit 2

Name Offical

Minnesota FFA Soils Scorecard

School _____

Number _____

2/06

Part 1 Surface Soil - A. Thickness in Inches

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

B. Color

(Allow 1 inch either way on thickness)

- 4
- ☒ Dark
 - ☐ Medium
 - ☐ Light

C. Texture

- 5
- ☐ Coarse
 - ☐ Moderately Coarse
 - ☐ Medium
 - ☒ Fine
 - ☐ Very Fine

D. Gravel and Rock

- 2
- ☒ None to Few
 - ☐ Gravelly
 - ☐ Very Gravelly
 - ☐ Extremely Gravelly

Part 2 Subsurface Soil - A. Thickness in Inches

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

B. Color

(Allow 1 inch either way on thickness)

- 4
- ☒ Bright
 - ☐ Mottled
 - ☐ Dull

C. Texture

- 5
- ☐ Coarse
 - ☐ Moderately Coarse
 - ☒ Medium
 - ☐ Fine
 - ☐ Very Fine

D. Gravel and Rock

- 2
- ☒ None to Few
 - ☐ Gravelly
 - ☐ Very Gravelly
 - ☐ Extremely Gravelly

Part 3 Parent material - A. Thickness in Inches

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

(Allow 1 inch either way on thickness)

Part 3 Parent material - Continued

B. Texture

- 5
- ☐ Coarse
 - ☐ Moderately Coarse
 - ☒ Medium
 - ☐ Fine
 - ☐ Very Fine

C. Gravel and Rock

- 2
- ☒ None to Few
 - ☐ Gravelly
 - ☐ Very Gravelly
 - ☐ Extremely Gravelly

Part 4 A. Steepness of Slope

- 3
- ☒ Nearly level - 2 or less %
 - ☐ Gently sloping 3 - 6 %
 - ☐ Moderately sloping 7-12%
 - ☐ Strongly sloping 13-18 %
 - ☐ Steep - > 18%

B. Topography

- 3
- ☒ Upland
 - ☐ Terrace - Footslope
 - ☐ Bottomland - Flood Plains
 - ☐ Depressional Area - No outlet

Part 5 - Land Capability Classification

- 6
- ☐ Class I
 - ☐ Class II
 - ☐ Class III
 - ☐ Class IV
 - ☒ Class V
 - ☐ Class VI
 - ☐ Class VII
 - ☐ Class VIII

Land Suitable for Cultivated Crops

Land Suitable for Permanent Vegetation

Score 6 points for correct answer - 3 points for 1 class off except for class 5.

Part 6 Interpretation of Soil Features

A. Type of Material that Limits Depth

- 2
- ☒ None-No limiting materials
 - ☐ Bedrock-Soft or hard
 - ☐ Hardpan-Cemented
 - ☐ Very gravelly sand or high water table

B. Parent Material

- 2
- ☐ Bedrock-Hard or soft
 - ☐ Alluvium/Outwash/Lacustrine
 - ☒ Till/Loess/Aeolian Sand
 - ☐ Organic materials-Peat of muck

C. Depth Favorable

- 2
- ☒ Very deep - 60 inches or more
 - ☐ Deep - 40 through 59 inches
 - ☐ Moderately Deep - 20 through 39 inches
 - ☐ Shallow - less than 20 inches

D. Air and Water Movement (Subsoil Permiability)

- 2
- ☐ Very rapid
 - ☒ Rapid
 - ☐ Moderate
 - ☐ Slow

Pt 2

1. Available water in horizon per inch of soil

1	0.05	Surface Horizon	0.2 x 12 = 2.4
1	0.15		
1	0.20		
1	0.05	b. Subsoil	0.2 x 22 = 4.4
1	0.15		
1	0.20		
1	0.05	c. Underlying material	0.2 x 26 = 5.2
1	0.15		
1	0.20		

2. Available water capacity per horizon

1	0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	5.1-6.0	7.1-8.0	8.1 or >
1								
1	0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	5.1-6.0	7.1-8.0	8.1 or >
1								
1	0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	5.1-6.0	7.1-8.0	8.1 or >
1								

3. Total available water capacity in five feet of soil

4	Very low Less than 3 inches
4	Low 3.0 - 6.0 inches
4	Moderate 6.1 - 9.0 inches
4	High - over 9.0 inches

4. Internal Drainage

4	Well drained
4	Moderately well drained
4	Somewhat poorly drained
4	Poorly or very poorly drained

Part 7 - Accelerated Erosion

A. Amount of erosion

2	No erosion evident (less than 2")
2	Deposition (2" or greater)
2	Erosion present (2" or greater)

B. Kind of erosion

2	None
2	Active gully
2	Wind erosion
2	Sheet or rill

Part 8 - Need for Erosion Control

A. Water Erosion

3	None to slight
3	Crop cover, sodcover & conservation tillage
3	Contour, strip crop and conservation tillage
3	Grass waterway & gully control
3	Woodland or permanent pasture
3	Wildlife or recreation

B. Wind Erosion

3	None to Slight
3	Mulch tillage, cover crops & field windbreak

Part 9 Drainage Required

5	Surface and/or tile
5	None required

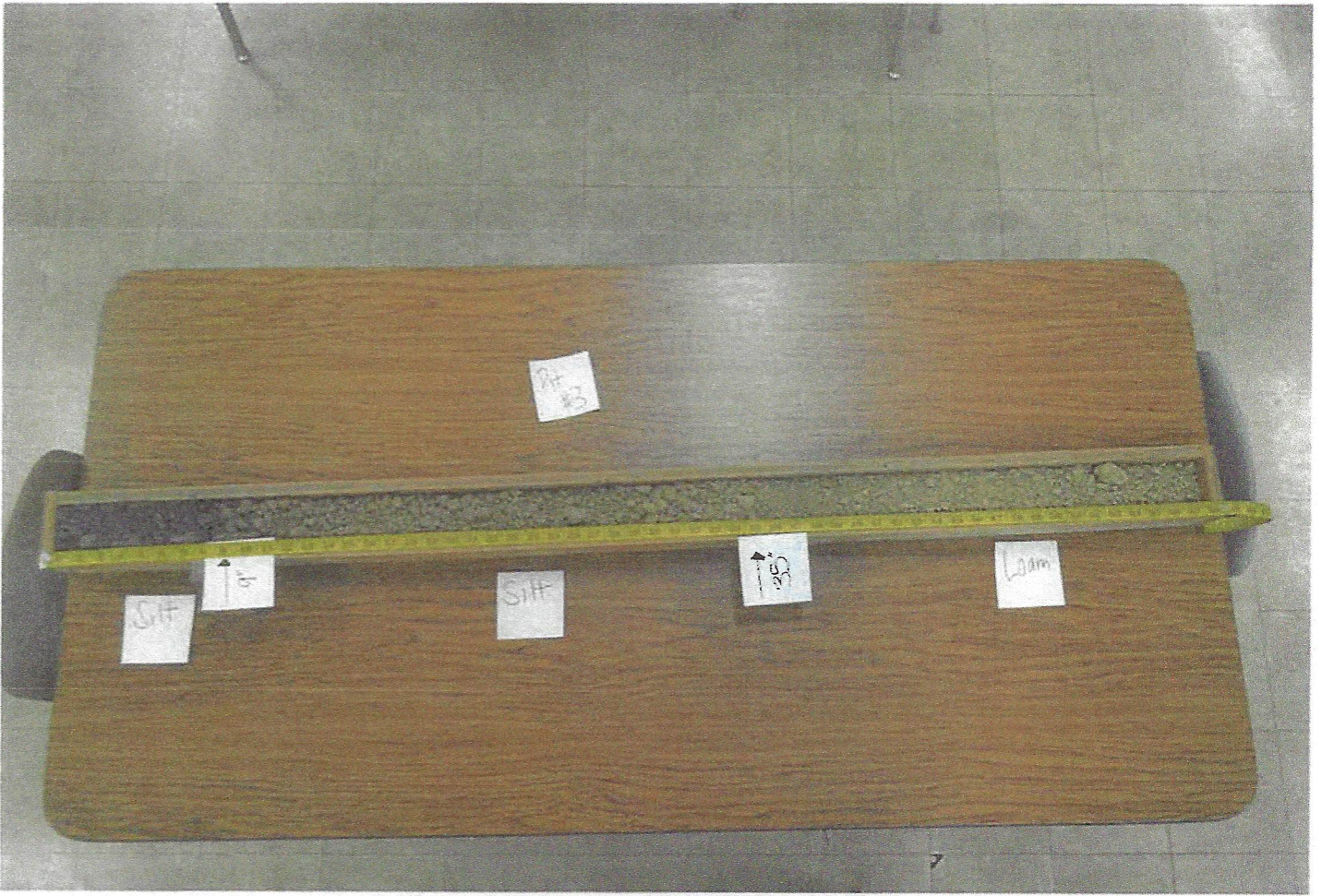
Part 10 Fertilizer and Lime Recommendations

Record recommended fertilizer application rates

2	50	Nitrogen pounds per acre
2	0	Phosphorous pounds per acre
2	110	Potassium pounds per acre
2	2.5	Lime pounds per acre

Part 11 - Land-use Limitations (Points are for each section)

		(3 pts)	(1 pt)	(1 pt)	(1 pt)	(1 pt)	(1 pt)	(1 pt)	(1 pt)
	Use	Limitation	% Slope	Surface Soil Texture	Flooding	Internal Drainage Class	Permeability Class	Depth to Bedrock (inches)	Subsoil or Underlying Materials(Shrink Swell Potential)
9	Dwellings (lawns), foundations, basements	☐ Slight	☒ 0-6	☐ medium, moderate coarse	☒ none	☒ well drained, mod. well drained		☒ more than 60	☒ coarse; mod. coarse, medium
		☒ moderate	☐ 6.1-12	☒ coarse, fine, very fine				☐ 40-60	☐ fine texture
		☐ severe	☐ more than 12		☐ any flooding	☐ somewhat poorly drained, poorly drained		☐ less than 40	☐ very fine texture
8	Septic tank absorption fields	☒ Slight	☒ 0-6		☒ none	☒ well drained, moderately well drained	☒ very rapid, rapid	☒ more than 60	
		☐ moderate	☐ 6.1-12				☐ moderately slow to mod rapid	☐ 40-60	
		☐ severe	☐ more than 12		☐ any flooding	☐ somewhat poorly, poorly drained	☐ slow to very slow	☐ less than 40	
8	Farm lagoons and holding basins	☐ slight	☒ 0-2		☒ None	☒ well drained, moderately well drained	☐ slow	☒ more than 60	
		☒ moderate	☐ 2.1-6			☐ somewhat poorly drained	☐ moderately slow to mod rapid	☐ 40-60	
		☒ Severe	☐ more than 6		☐ any flooding	☐ poorly drained	☒ very rapid, rapid	☐ less than 40	



#3

FFA LAND JUDGING PLACARD - MINNESOTA - FFA

Pit Number Pit 3
Lime Area 1 Flooding None
pH 6.2 SMP Buffer Index — Assumed Field Size 100 Acres
P Test 25 lb./acres available phosphorus
Subsoil Phosphorus Level —
K Test 125 lb./acres exchangeable potassium
Subsoil Potassium Level — Manure Applied — Tons/Acre
Yield Goal — bu./acres
Crop to be planted Alfalfa - Est. Stand
Past Crop Alfalfa Est. Stand
Original Surface Soil Depth 12 inches
Slope Length 200 feet
Depth to permanent water table 20 Feet

4 Foot slope rise

No gravel in any of the three layers

Pit 3

Name Official

Minnesota FFA Soils Scorecard
School _____

Number _____

2/06

Part 1 Surface Soil - A. Thickness in inches

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

B. Color

- 4 ☒ Dark
☐ Medium
☐ Light

(Allow 1 inch either way on thickness)

C. Texture

- 5 ☐ Coarse
☐ Moderately Coarse
☒ Medium
☐ Fine
☐ Very Fine

D. Gravel and Rock

- 2 ☒ None to Few
☐ Gravelly
☐ Very Gravelly
☐ Extremely Gravelly

Part 2 Subsurface Soil - A. Thickness in inches

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

B. Color

- 4 ☒ Bright
☐ Mottled
☐ Dull

(Allow 1 inch either way on thickness)

C. Texture

- 5 ☐ Coarse
☐ Moderately Coarse
☒ Medium
☐ Fine
☐ Very Fine

D. Gravel and Rock

- 2 ☒ None to Few
☐ Gravelly
☐ Very Gravelly
☐ Extremely Gravelly

Part 3 Parent material - A. Thickness in inches

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

(Allow 1 inch either way on thickness)

Part 3 Parent material - Continued

B. Texture

- 5 ☐ Coarse
☐ Moderately Coarse
☒ Medium
☐ Fine
☐ Very Fine

C. Gravel and Rock

- 2 ☒ None to Few
☐ Gravelly
☐ Very Gravelly
☐ Extremely Gravelly

Part 4 A. Steepness of Slope

- 3 ☒ Nearly level - 2 or less %
☐ Gently sloping 3 - 6 %
☐ Moderately sloping 7-12%
☐ Strongly sloping 13-18 %
☐ Steep - > 18%

B. Topography

- 3 ☒ Upland
☐ Terrace - Footslope
☐ Bottomland - Flood Plains
☐ Depressional Area - No outlet

Part 5 - Land Capability Classification

- 6 ☒ Class I
☐ Class II
☐ Class III
☐ Class IV
☐ Class V
☐ Class VI
☐ Class VII
☐ Class VIII

Land Suitable for
Cultivated Crops

Land Suitable for
Permanent
Vegetation

Score 6 points for
correct answer - 3 points
for 1 class off except for
class 5.

Part 6 Interpretation of Soil Features

A. Type of Material that Limits Depth

- 2 ☒ None-No limiting materials
☐ Bedrock-Soft or hard
☐ Hardpan-Cemented
☐ Very gravelly sand or high water table

B. Parent Material

- 2 ☐ Bedrock-Hard or soft
☐ Alluvium/Outwash/Lacustrine
☒ Till/Loess/Aeolian Sand
☐ Organic materials-Peat of muck

C. Depth Favorable

- 2 ☒ Very deep - 60 inches or more
☐ Deep - 40 through 59 inches
☐ Moderately Deep - 20 through 39 inches
☐ Shallow - less than 20 inches

D. Air and Water Movement (Subsoil Permeability)

- 2 ☒ Very rapid
☐ Rapid
☐ Moderate
☐ Slow

Part 1 - Available Water Capacity

1. Available water in horizon per inch of soil

1	0.05	Surface Horizon	Calculation Area $0.2 \times 9 = 1.8$
	0.15		
	0.20		
1	0.05	b. Subsoil	$0.2 \times 20 = 9.2$
	0.15		
	0.20		
1	0.05	c. Underlying material	$0.2 \times 25 = 5$
	0.15		
	0.20		

2. Available water capacity per horizon

a. Surface horizon

1	0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	5.1-6.0	7.1-8.0	8.1 or >
---	-------	---------	---------	---------	---------	---------	---------	----------

b. Subsoil

1	0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	5.1-6.0	7.1-8.0	8.1 or >
---	-------	---------	---------	---------	---------	---------	---------	----------

c. Underlying material

1	0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	5.1-6.0	7.1-8.0	8.1 or >
---	-------	---------	---------	---------	---------	---------	---------	----------

3. Total available water capacity in five feet of soil

4

Very low Less than 3 inches

Low 3.0 - 6.0 inches

Moderate 6.1 - 9.0 inches

High - over 9.0 inches

4. Internal Drainage

4

Well drained

Moderately well drained

Somewhat poorly drained

Poorly or very poorly drained

Part 7 - Accelerated Erosion

A. Amount of erosion

2

No erosion evident (less than 2")

Deposition (2" or greater)

Erosion present (2" or greater)

B. Kind of erosion

2

None

Active gully

Wind erosion

Sheet or rill

Part 8 - Need for Erosion Control

A. Water Erosion

3

None to slight

Crop cover, sodcover & conservation tillage

Contour, strip crop and conservation tillage

Grass waterway & gully control

Woodland or permanent pasture

Wildlife or recreation

B. Wind Erosion

3

None to Slight

Mulch tillage, cover crops & field windbreak

Part 9 Drainage Required

5

Surface and/or tile

None required

Part 10 Fertilizer and Lime Recommendations

Record recommended fertilizer application rates

2	10	Nitrogen pounds per acre
2	56	Phosphorous pounds per acre
2	165	Potassium pounds per acre
2	5	Lime pounds per acre

Part 11 - Land use Limitations (Points are for each section)

Use	Limitation (3 pts)	% Slope (1 pt)	Surface Soil Texture (1 pt)	Flooding (1 pt)	Internal Drainage Class (1 pt)	Permeability Class (1 pt)	Depth to Bedrock (inches) (1 pt)	Subsoil or Underlying Materials (Shrink Swell Potential) (1 pt)
9 Dwellings (lawns), foundations, basements	☒ Slight	☒ 0-6	☒ medium, moderate coarse	☒ none	☒ well drained, mod. well drained		☒ more than 60	☒ coarse; mod. coarse, medium
	☐ moderate	☐ 6.1-12	☐ coarse, fine, very fine				☐ 40-60	☐ fine texture
	☐ severe	☐ more than 12		☐ any flooding	☐ somewhat poorly drained, poorly drained		☐ less than 40	☐ very fine texture
8 Septic tank absorption fields	☒ Slight	☒ 0-6		☒ none	☒ well drained, moderately well drained	☒ very rapid, rapid	☒ more than 60	
	☐ moderate	☐ 6.1-12				☐ moderately slow to mod rapid	☐ 40-60	
	☐ severe	☐ more than 12		☐ any flooding	☐ somewhat poorly, poorly drained	☐ slow to very slow	☐ less than 40	
8 Farm lagoons and holding basins	☐ slight	☐ 0-2		☒ None	☒ well drained moderately well drained	☐ slow	☒ more than 60	
	☐ moderate	☐ 2.1-6			☐ somewhat poorly drained	☐ moderately slow to mod rapid	☐ 40-60	
	☒ Severe	☐ more than 6		☐ any flooding	☐ poorly drained	☒ very rapid, rapid	☐ less than 40	



#4

FFA LAND JUDGING PLACARD - MINNESOTA - FFA

Pit Number Pit 4
Lime Area 2 Flooding NONE
pH 7.0 SMP Buffer Index - Assumed Field Size - Acres
P Test 31 lb./acres available phosphorus
Subsoil Phosphorus Level High
K Test 177 lb./acres exchangeable potassium
Subsoil Potassium Level High Manure Applied NONE Tons/Acre
Corn Yield Goal 120 bu./acres
Crop to be planted CORN
Past Crop Soybeans
Original Surface Soil Depth 42 inches
Slope Length 200 feet
Depth to permanent water table 73 inches

Zero slope rise

No gravel in any of the three layers

Pit 4

Name

Official

Minnesota FFA Soils Scorecard

School

Number

2/06

Part 1 Surface Soil - A. Thickness in inches

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

B. Color

- 4
- ☒ Dark
 - ☐ Medium
 - ☐ Light

(Allow 1 inch either way on thickness)

C. Texture

- 5
- ☐ Coarse
 - ☐ Moderately Coarse
 - ☒ Medium
 - ☐ Fine
 - ☐ Very Fine

D. Gravel and Rock

- 2
- ☒ None to Few
 - ☐ Gravelly
 - ☐ Very Gravelly
 - ☐ Extremely Gravelly

Part 2 Subsurface Soil - A. Thickness in inches

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

B. Color

- 4
- ☒ Bright
 - ☐ Mottled
 - ☐ Dull

(Allow 1 inch either way on thickness)

C. Texture

- 5
- ☐ Coarse
 - ☐ Moderately Coarse
 - ☒ Medium
 - ☐ Fine
 - ☐ Very Fine

D. Gravel and Rock

- 2
- ☒ None to Few
 - ☐ Gravelly
 - ☐ Very Gravelly
 - ☐ Extremely Gravelly

Part 3 Parent material - A. Thickness in inches

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

(Allow 1 inch either way on thickness)

Part 3 Parent material - Continued

B. Texture

- 5
- ☒ Coarse
 - ☐ Moderately Coarse
 - ☐ Medium
 - ☐ Fine
 - ☐ Very Fine

C. Gravel and Rock

- 2
- ☒ None to Few
 - ☐ Gravelly
 - ☐ Very Gravelly
 - ☐ Extremely Gravelly

Part 4 A. Steepness of Slope

- 3
- ☒ Nearly level - 2 or less %
 - ☐ Gently sloping 3 - 6 %
 - ☐ Moderately sloping 7-12%
 - ☐ Strongly sloping 13-18 %
 - ☐ Steep - > 18%

B. Topography

- 3
- ☒ Upland
 - ☐ Terrace - Footslope
 - ☐ Bottomland - Flood Plains
 - ☐ Depressional Area - No outlet

Part 5 - Land Capability Classification

- 6
- ☒ Class I
 - ☐ Class II
 - ☐ Class III
 - ☐ Class IV
 - ☐ Class V
 - ☐ Class VI
 - ☐ Class VII
 - ☐ Class VIII

Land Suitable for Cultivated Crops

Land Suitable for Permanent Vegetation

Score 6 points for correct answer - 3 points for 1 class off except for class 5.

Part 6 Interpretation of Soil Features

A. Type of Material that Limits Depth

- 2
- ☒ None-No limiting materials
 - ☐ Bedrock-Soft or hard
 - ☐ Hardpan-Cemented
 - ☐ Very gravelly sand or high water table

B. Parent Material

- 2
- ☐ Bedrock-Hard or soft
 - ☒ Alluvium/Outwash/Lacustrine
 - ☐ Till/Loess/Aeolian Sand
 - ☐ Organic materials-Peat of muck

C. Depth Favorable

- 2
- ☒ Very deep - 60 inches or more
 - ☐ Deep - 40 through 59 inches
 - ☐ Moderately Deep - 20 through 39 inches
 - ☐ Shallow - less than 20 inches

D. Air and Water Movement (Subsoil Permeability)

- 2
- ☒ Very rapid
 - ☐ Rapid
 - ☐ Moderate
 - ☐ Slow

Pit 4

Part 6 - Available Water Capacity

1. Available water in horizon per inch of soil

1	0.05	Surface Horizon
	0.15	
	0.20	
1	0.05	b. Subsoil
	0.15	
	0.20	
1	0.05	c. Underlying material
	0.15	
	0.20	

Calculation Area
 $0.2 \times 41 = 8.2$
 $0.2 \times 8 = 1.6$
 $0.05 \times 11 = 0.55$
10.35

2. Available water capacity per horizon

a. Surface horizon

1	0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	5.1-6.0	7.1-8.0	8.1 or >

b. Subsoil

1	0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	5.1-6.0	7.1-8.0	8.1 or >

c. Underlying material

1	0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	5.1-6.0	7.1-8.0	8.1 or >

3. Total available water capacity in five feet of soil

4

Very low Less than 3 inches

Low 3.0 - 6.0 inches

Moderate 6.1 - 9.0 inches

High - over 9.0 inches

4. Internal Drainage

4

Well drained

Moderately well drained

Somewhat poorly drained

Poorly or very poorly drained

Part 7 - Available Water Factor

A. Amount of erosion

2

No erosion evident (less than 2")

Deposition (2" or greater)

Erosion present (2" or greater)

B. Kind of erosion

2

None

Active gully

Wind erosion

Sheet or rill

Part 8 - Need for Erosion Control

A. Water Erosion

3

None to slight

Crop cover, sodcover & conservation tillage

Contour, strip crop and conservation tillage

Grass waterway & gully control

Woodland or permanent pasture

Wildlife or recreation

B. Wind Erosion

3

None to Slight

Mulch tillage, cover crops & field windbreak

Part 9 Drainage Required

5

Surface and/or tile

None required

Part 10 Fertilizer and Lime Recommendations

Record recommended fertilizer application rates

2	160	Nitrogen pounds per acre
2	30	Phosphorous pounds per acre
2	40	Potassium pounds per acre
2	0	Lime pounds per acre

Part 11 - Land use Limitations (Points are for each section)

Use	Limitation (5 pts)	% Slope (1 pt)	Surface Soil Texture (1 pt)	Flooding (1 pt)	Internal Drainage Class (1 pt)	Permeability Class (1 pt)	Depth to Bedrock (inches) (1 pt)	Subsoil or Underlying Materials (Shrink Swell Potential) (1 pt)
9 Dwellings (lawns), foundations, basements	☒ Slight	☒ 0-6	☒ medium, moderate coarse	☒ none	☒ well drained, mod. well drained		☒ more than 60	☒ coarse, mod. coarse, medium
	☐ moderate	☐ 6.1-12	☐ coarse, fine, very fine				☐ 40-60	☐ fine texture
	☐ severe	☐ more than 12		☐ any flooding	☐ somewhat poorly drained, poorly drained		☐ less than 40	☐ very fine texture
8 Septic tank absorption fields	☒ Slight	☒ 0-6		☒ none	☒ well drained, moderately well drained	☒ very rapid, rapid	☒ more than 60	
	☐ moderate	☐ 6.1-12				☐ moderately slow to mod rapid	☐ 40-60	
	☐ severe	☐ more than 12		☐ any flooding	☐ somewhat poorly, poorly drained	☐ slow to very slow	☐ less than 40	
8 Farm lagoons and holding basins	☐ slight	☒ 0-2		☒ None	☒ well drained, moderately well drained	☐ slow	☒ more than 60	
	☐ moderate	☒ 2.1-6			☐ somewhat poorly drained	☐ moderately slow to mod rapid	☐ 40-60	
	☒ Severe	☐ more than 6		☐ any flooding	☐ poorly drained	☒ very rapid, rapid	☐ less than 40	