

MISSOURI SOIL JUDGING SCORECARD

FORM 19

Contestant: _____ Contestant Number: _____ Site: 1 2 3 4 5 6
 (Circle)

School: _____ School Number: _____

Total Front	+	Total Back	=	Grand Total

<p>FIRST HORIZON (____ to ____ inches)</p> <p>1. ____ Color</p> <p>2. ____ All Mottles</p> <p>3. ____ Texture</p> <p>4. ____ Structure Type</p> <p>5. ____ Total Rock Fragments</p> <p>6. ____ Rock Fragments (3 to 10 inches)</p> <p>7. ____ Special Features</p> <p>8. ____ Horizon Name I</p> <p>9. ____ Horizon Name II</p>	<p align="center">*****</p> <p align="center">COLOR</p> <p>a = Dark brown, Very dark brown, Black</p> <p>b = Light brown, Brown, Yellowish brown</p> <p>c = Red, Reddish brown</p> <p>d = Dark gray, Light gray, White</p> <p align="center">*****</p> <p align="center">ALL MOTTLES (Abundance)</p> <p>a = Few (0 - 1.9%)</p> <p>b = Common (2 - 19%)</p> <p>c = Many (= or > 20%)</p> <p align="center">*****</p> <p align="center">TEXTURE</p> <p>a = Sand, Loamy sand</p> <p>b = Sandy loam</p> <p>c = Loam, Silt loam</p> <p>d = Sandy clay loam, Clay loam, Silty clay loam</p> <p>e = Clay, Silty clay, Sandy clay, or N/A</p> <p align="center">*****</p> <p align="center">STRUCTURE TYPE</p> <p>a = Granular</p> <p>b = Platy</p> <p>c = Blocky</p> <p>d = Prismatic</p> <p>e = Massive, Single grain</p> <p align="center">*****</p>	<p align="center">*****</p> <p align="center">TOTAL ROCK FRAGMENTS (2mm to 10 inches)</p> <p>a = < 15% (no modifier)</p> <p>b = 15 to 35% (gravelly, channery, cobbly, or flaggy)</p> <p>c = 35 to 60% VERY (gravelly, channery, cobbly, or flaggy)</p> <p>d = > 60% EXTREMELY (gravelly, channery, cobbly, or flaggy)</p> <p align="center">*****</p> <p align="center">ROCK FRAGMENTS (3 to 10 inches only)</p> <p>a = < 15%</p> <p>b = 15 - 35%</p> <p>c = 35 - 60%</p> <p>d = > 60%</p> <p align="center">*****</p> <p align="center">SPECIAL FEATURES</p> <p>a = None</p> <p>b = Fragipan</p> <p>c = Abrupt textural change</p> <p align="center">*****</p> <p align="center">HORIZON NAME I</p> <p>a = A</p> <p>b = B</p> <p>c = None of these</p> <p>d = Ap</p> <p>e = E</p> <p align="center">*****</p> <p align="center">HORIZON NAME II</p> <p>a = R</p> <p>b = Cr</p> <p>c = C</p> <p>d = None of the above</p>	<p>THIRD HORIZON (____ to ____ inches)</p> <p>19. ____ Color</p> <p>20. ____ All Mottles</p> <p>21. ____ Texture</p> <p>22. ____ Structure Type</p> <p>23. ____ Total Rock Fragments</p> <p>24. ____ Rock Fragments (3 to 10 inches)</p> <p>25. ____ Special Features</p> <p>26. ____ Horizon Name I</p> <p>27. ____ Horizon Name II</p>	
<p>SECOND HORIZON (____ to ____ inches)</p> <p>10. ____ Color</p> <p>11. ____ All Mottles</p> <p>12. ____ Texture</p> <p>13. ____ Structure Type</p> <p>14. ____ Total Rock Fragments</p> <p>15. ____ Rock Fragments (3 to 10 inches)</p> <p>16. ____ Special Features</p> <p>17. ____ Horizon Name I</p> <p>18. ____ Horizon Name II</p>			<p>FOURTH HORIZON (____ to ____ inches)</p> <p>28. ____ Color</p> <p>29. ____ All Mottles</p> <p>30. ____ Texture</p> <p>31. ____ Structure Type</p> <p>32. ____ Total Rock Fragments</p> <p>33. ____ Rock Fragments (3 to 10 inches)</p> <p>34. ____ Special Features</p> <p>35. ____ Horizon Name I</p> <p>36. ____ Horizon Name II</p>	
			<p>TOTAL FRONT</p> <div style="border: 2px solid black; width: 100%; height: 30px;"></div>	

NOTE: Whenever any answers overlap mark the answer that is most limiting.

Directions: Use Interpretation Help Sheet; then darken in the correct responses (Example: (a) (b) (c))

PROPERTIES OF THE WHOLE SOIL

37. Effective Rooting Depth

- (a) Very deep (>60 inches)
- (b) Deep (40-60 inches)
- (c) Moderately deep (20-40 inches)
- (d) Shallow (10-20 inches)
- (e) Very shallow (<10 inches)

38. Available Water Capacity (AWC)

- (a) Very high (> 12 inches)
- (b) High (9 < 12 inches)
- (c) Moderate (6 < 9 inches)
- (d) Low (3 < 6 inches)
- (e) Very low (< 3 inches)

39. Surface Soil Permeability

- (a) Rapid to very rapid (>6.0 in./hr.)
- (b) Moderately rapid (2.0-6.0 in./hr.)
- (c) Moderate (0.6-2.0 in./hr.)
- (d) Moderately slow (0.2-0.6 in./hr.)
- (e) Slow to extremely slow (<0.2 in./hr.)

40. Subsoil Permeability

- (a) Rapid to very rapid (>6.0 in./hr.)
- (b) Moderately rapid (2.0-6.0 in./hr.)
- (c) Moderate (0.6-2.0 in./hr.)
- (d) Moderately slow (0.2-0.6 in./hr.)
- (e) Slow to extremely slow (<0.2 in./hr.)

41. Internal Drainage

- (a) Excessive/somewhat excessive
- (b) Well
- (c) Moderately well
- (d) Somewhat poorly drained
- (e) Poorly drained/very poorly drained

42. Depth to High Water Table (WT)

- (a) >60 inches
- (b) 42-60 inches
- (c) 24-42 inches
- (d) 12-24 inches
- (e) <12 inches

43. Shrink-Swell Potential

- (a) Low
- (b) Moderate
- (c) High

TOTAL BACK

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SITE CHARACTERISTICS

44. Landform

- (a) Upland
- (b) Foot slopes or alluvial fans
- (c) Flood plain
- (d) Stream terrace
- (e) Sinkholes

45. Slope I

- (a) 0 - 1.99%
- (b) 2 - 4.99%
- (c) 5 - 8.99%
- (d) 9 - 13.99%
- (e) None of the above

46. Slope II

- (a) 14 - 24.99%
- (b) = or >25%
- (c) None of the above

47. Aspect

- (a) Northerly
- (b) Southerly
- (c) Easterly
- (d) Westerly
- (e) None of the above (<2% slope)

48. Parent Material I

- (a) Loess
- (b) Glacial till
- (c) Residuum or colluvium
- (d) Alluvium
- (e) None of the above

49. Parent Material II

- (a) Loess over glacial till
- (b) Loess over residuum or colluvium
- (c) Colluvial sediments over residuum or glacial till
- (d) Loess over alluvium
- (e) None of the above

50. Stoniness (area 100x100 ft. sq.)

- (a) None (>100 feet apart)
- (b) Stony (30-100 feet apart)
- (c) Very stony (5-30 feet apart)
- (d) Extremely stony (2.5-5 feet apart)
- (e) Rubbly (<2.5 feet apart)

51. Rockiness

- (a) Not rocky (<10 sq. ft./area)
- (b) Rocky (10-200 sq. ft./area)
- (c) Very rocky (200-1000 sq. ft./area)
- (d) Rock outcrop complex (>1000 sq. ft./area)

MANAGEMENT INTERPRETATIONS

52. Surface Drainage

- (a) Not needed
- (b) Needed

Irrigation Suitability

(a=Asset, b=Liability)

- 53. (a) (b) Surface soil texture
- 54. (a) (b) Slope
- 55. (a) (b) AWC
- 56. (a) (b) Depth to High Water Table
- 57. (a) (b) Permeability
- 58. (a) (b) Rock fragments (>3 in.)
- 59. (a) (b) Depth to bedrock

Hazards and Limitations for Cropping

(a=Yes, b=No)

- 60. (a) (b) Slope or erosion
- 61. (a) (b) Available water capacity
- 62. (a) (b) Surface drainage
- 63. (a) (b) Internal drainage
- 64. (a) (b) Rock fragments
- 65. (a) (b) Stoniness
- 66. (a) (b) Rockiness

Pond Reservoir Area

(a=Slight, b=Moderate, c=Severe)

- 67. (a) (b) (c) Permeability
- 68. (a) (b) (c) Depth to hard bedrock
- 69. (a) (b) (c) Depth to soft bedrock
- 70. (a) (b) (c) Slope

Limitations for Dwellings with Basements

(a=Slight, b=Moderate, c=Severe)

- 71. (a) (b) (c) Depth to High Water Table
- 72. (a) (b) (c) Flooding
- 73. (a) (b) (c) Shrink-Swell potential
- 74. (a) (b) (c) Slope
- 75. (a) (b) (c) Rock fragments (>3 in.)
- 76. (a) (b) (c) Depth to bedrock

Limits for Septic Tank Absorption Fields

(a=Slight, b=Moderate, c=Severe)

- 77. (a) (b) (c) Permeability
- 78. (a) (b) (c) Depth to High Water Table
- 79. (a) (b) (c) Depth to bedrock
- 80. (a) (b) (c) Slope
- 81. (a) (b) (c) Flooding
- 82. (a) (b) (c) Rock fragments (>3 in.)

Limitations for Sewage Lagoons

(a=Slight, b=Moderate, c=Severe)

- 83. (a) (b) (c) Permeability
- 84. (a) (b) (c) Slope
- 85. (a) (b) (c) Flooding
- 86. (a) (b) (c) Depth to High Water Table
- 87. (a) (b) (c) Depth to bedrock
- 88. (a) (b) (c) Rock fragments (>3 in.)