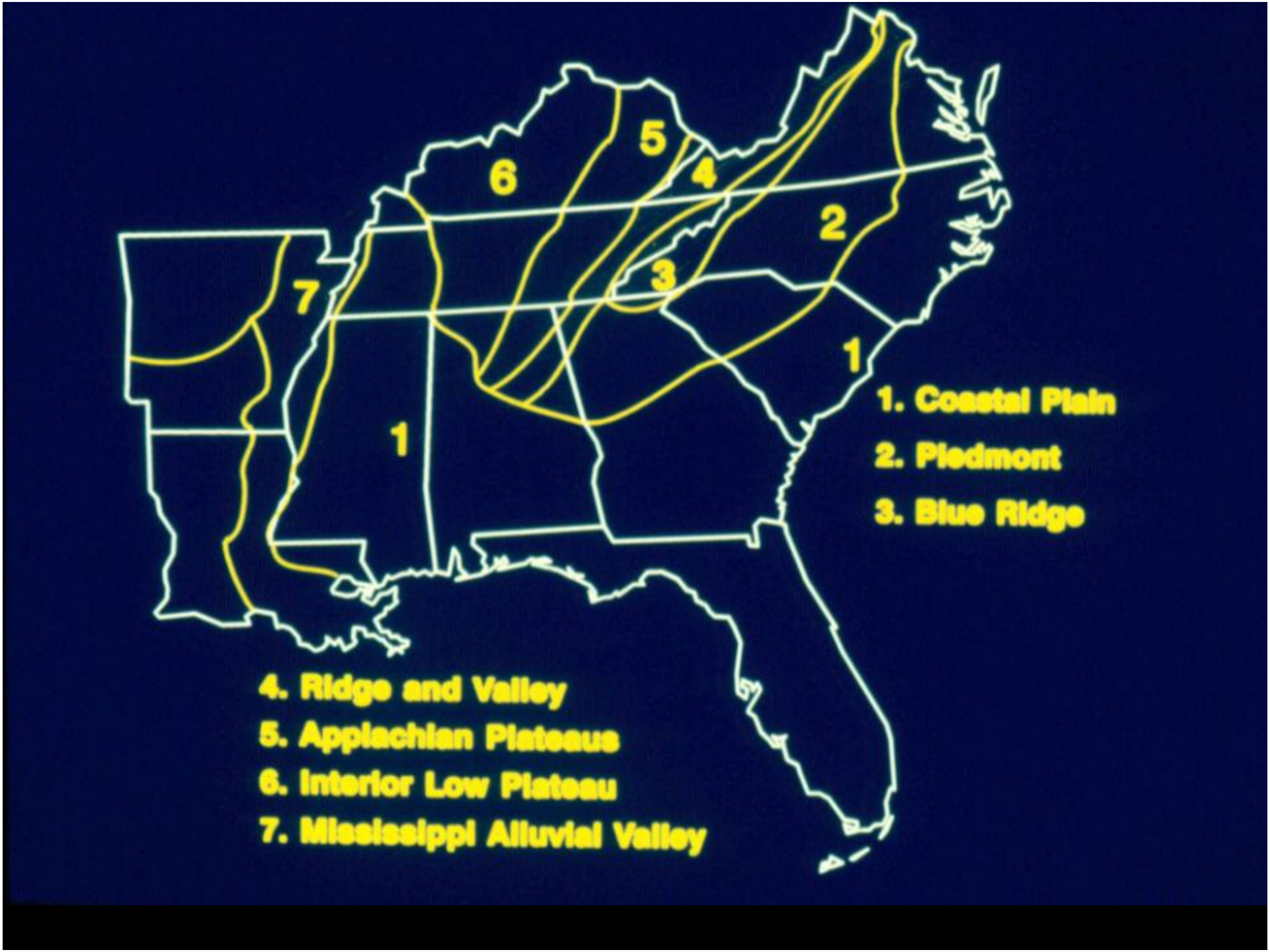
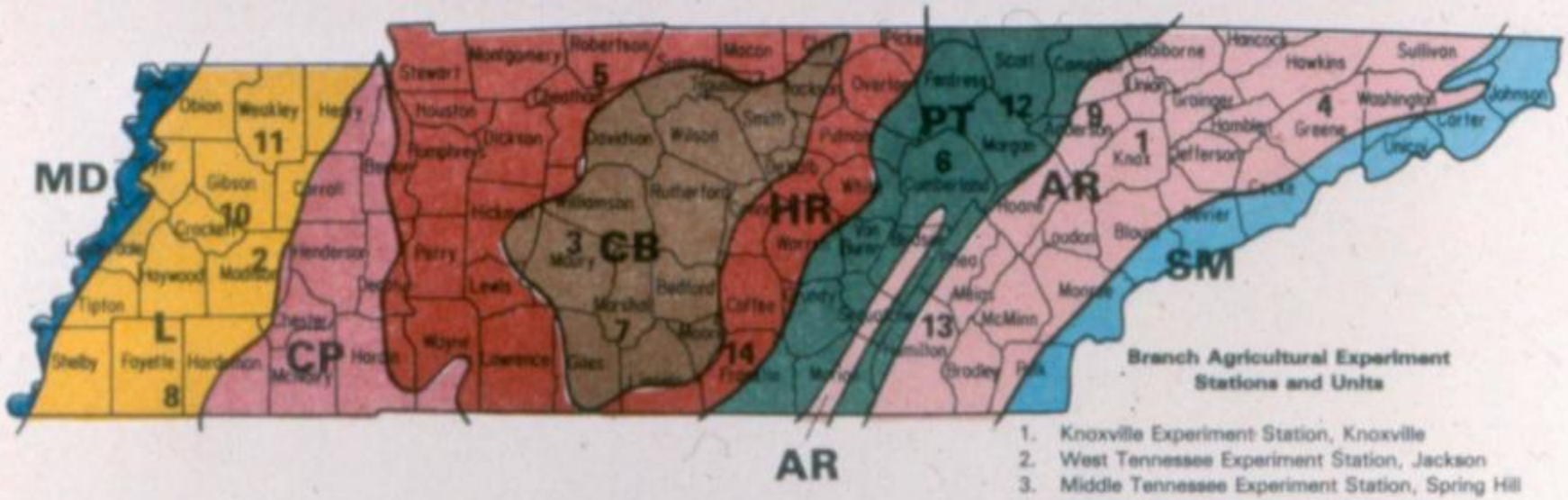

1. Coastal Plain
2. Piedmont
3. Blue Ridge
4. Ridge and Valley
5. Appalachian Plateaus
6. Interior Low Plateau
7. Mississippi Alluvial Valley

Tennessee Branch Agricultural Experiment Stations and Units
Tennessee Land Resource Areas



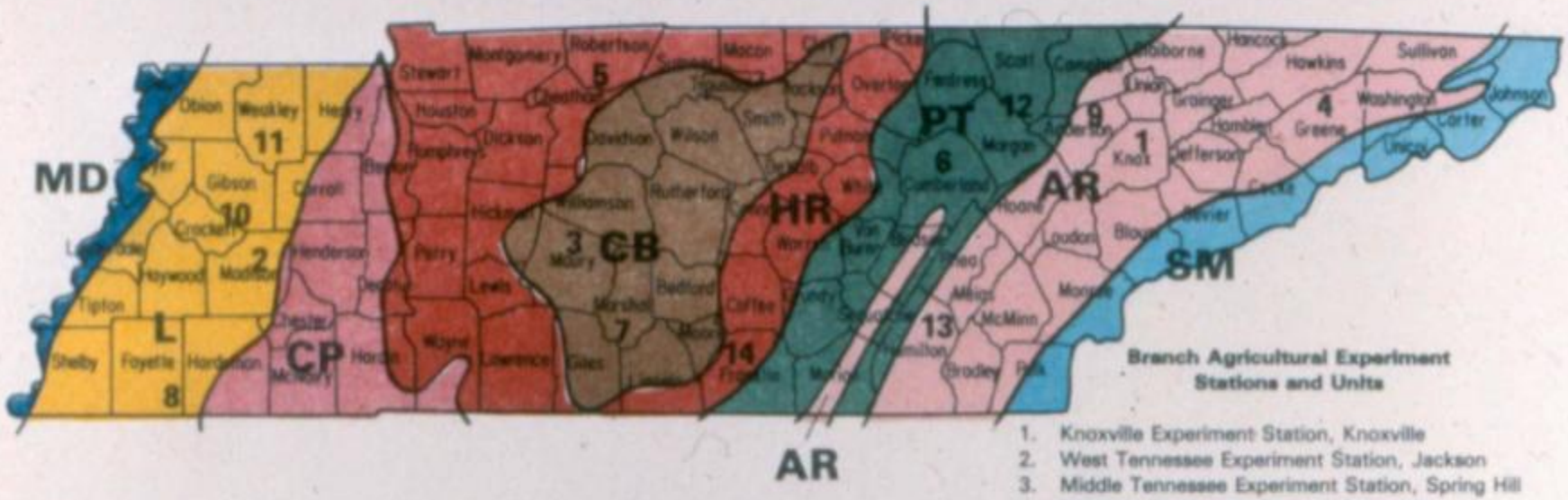
Land Resource Areas

MD	Mississippi Delta
L	Loess
CP	Coastal Plain
HR	Highland Rim
CB	Central Basin
PT	Cumberland Plateau and Mountains
AR	Appalachian Ridges and Valleys
SM	Smoky Mountains

Branch Agricultural Experiment Stations and Units

1. Knoxville Experiment Station, Knoxville
2. West Tennessee Experiment Station, Jackson
3. Middle Tennessee Experiment Station, Spring Hill
4. Tobacco Experiment Station, Greeneville
5. Highland Rim Experiment Station, Springfield
6. Plateau Experiment Station, Crossville
7. Dairy Experiment Station, Lewisburg
8. Ames Plantation Experiment Station, Grand Junction
9. Forestry Experiment Station, Oak Ridge
10. Milan Experiment Station, Milan
11. Martin Experiment Station, Martin
12. Cumberland Forest Unit, Scott and Morgan Counties
13. Friendship Forest Unit, Hamilton County
14. Highland Rim Forest Unit, Tullahoma

Tennessee Branch Agricultural Experiment Stations and Units
Tennessee Land Resource Areas



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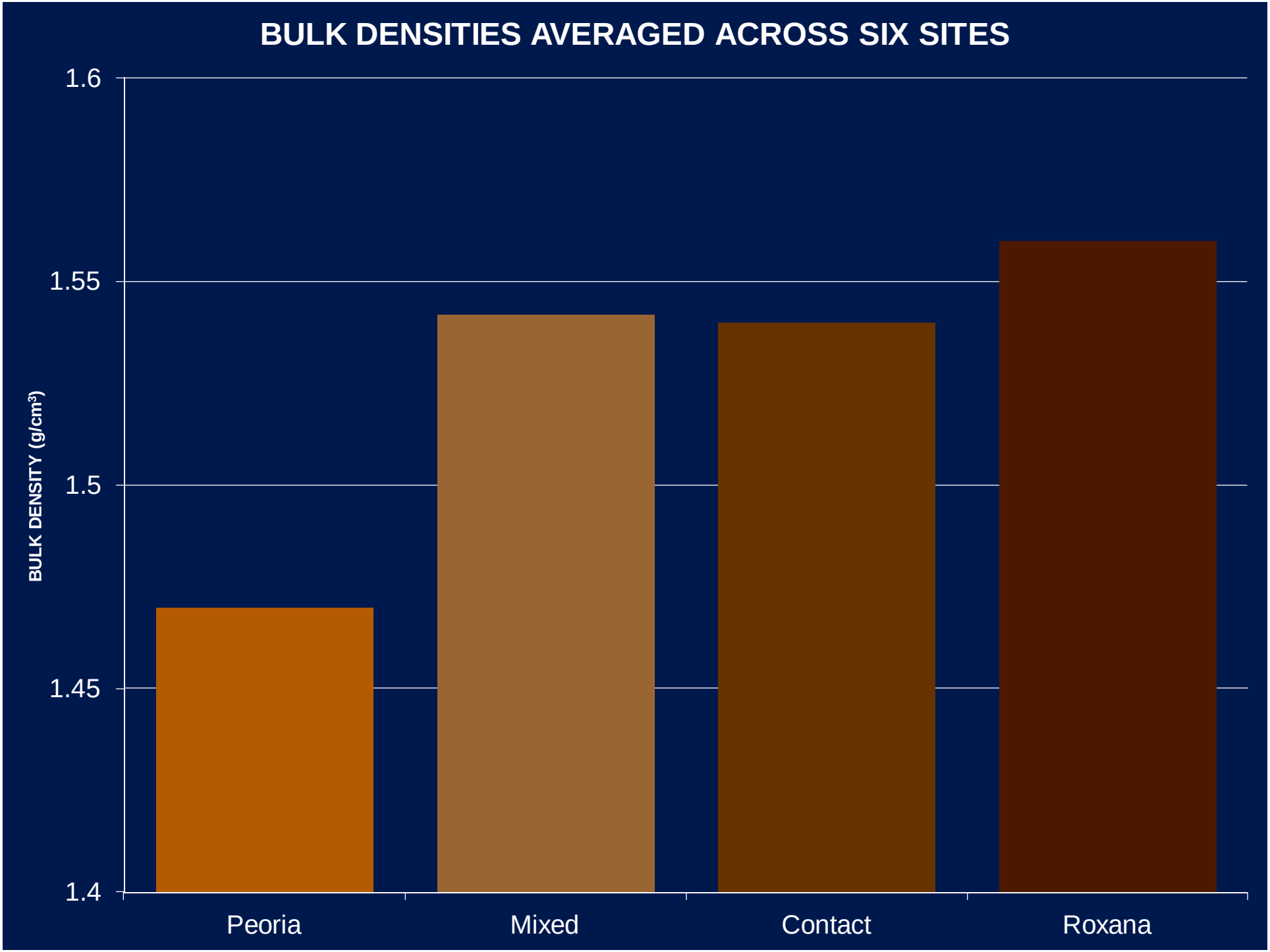
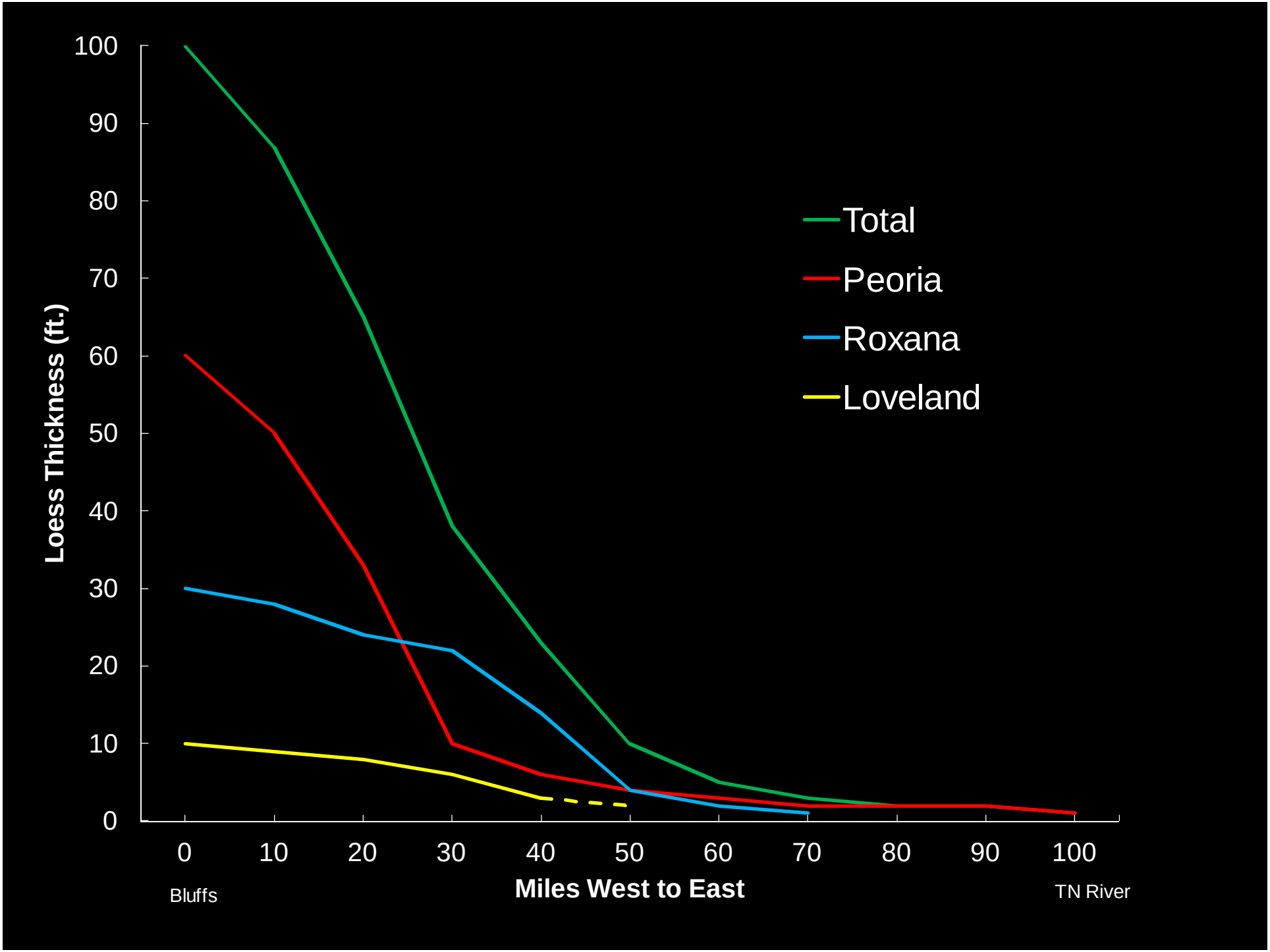
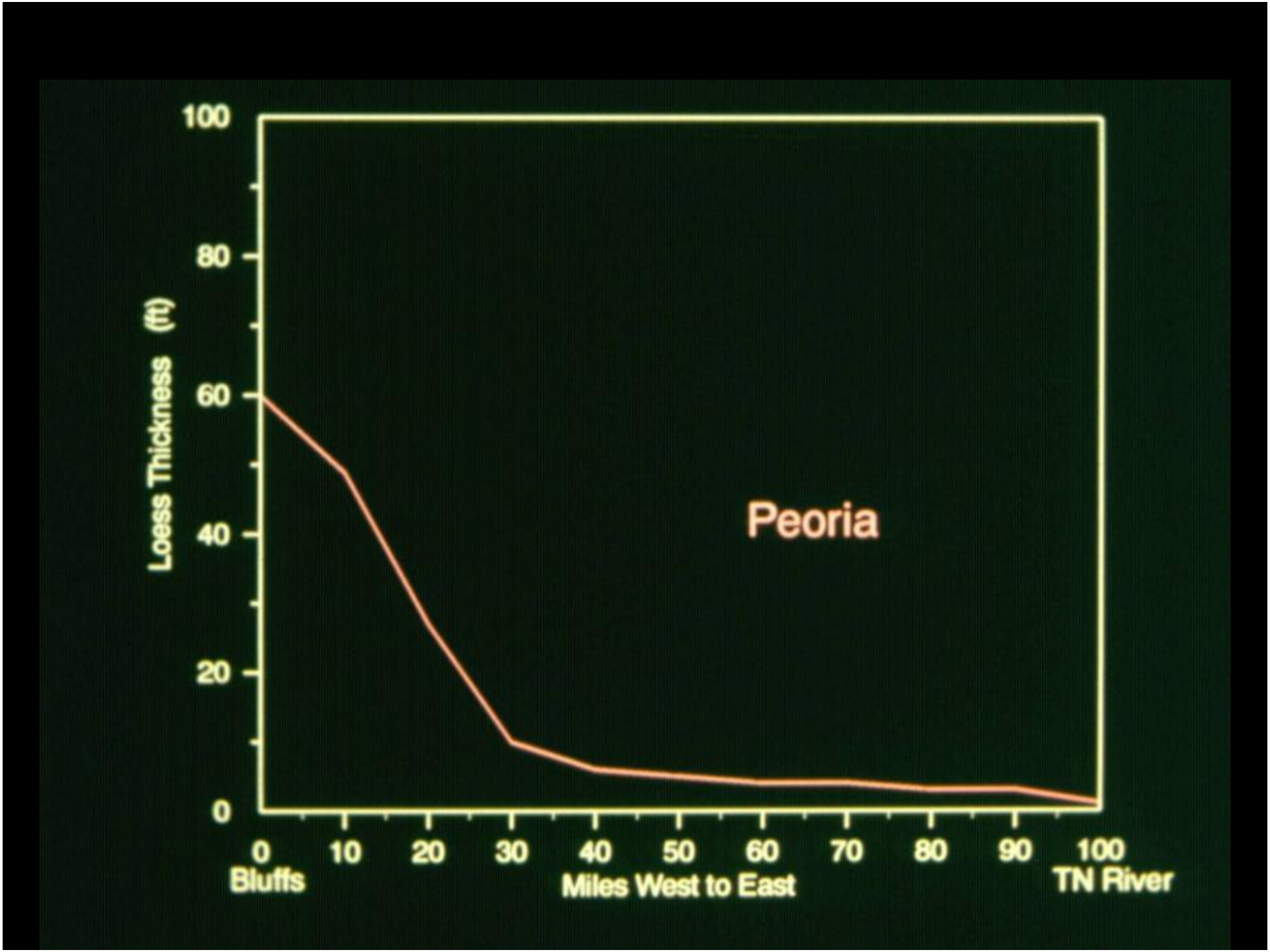
Loess

Loveland	100,000+
Roxanna	40 – 60,000
Peoria	10 – 12,000


BULK DENSITIES AVERAGED ACROSS SIX SITES
1.6
1.55
1.5
1.45
1.4
BULK DENSITY (g/cm³)
Peoria
Mixed
Contact
Roxana


100
90
80
70
60
50
40
30
20
10
0
Loess Thickness (ft.)
Total
Peoria
Roxana
Loveland
0
10
20
30
40
50
60
70
80
90
100
Bluffs
Miles West to East
TN River


Loess Thickness (ft)
100
80
60
40
20
0
Peoria
0
10
20
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Bluffs
Miles West to East
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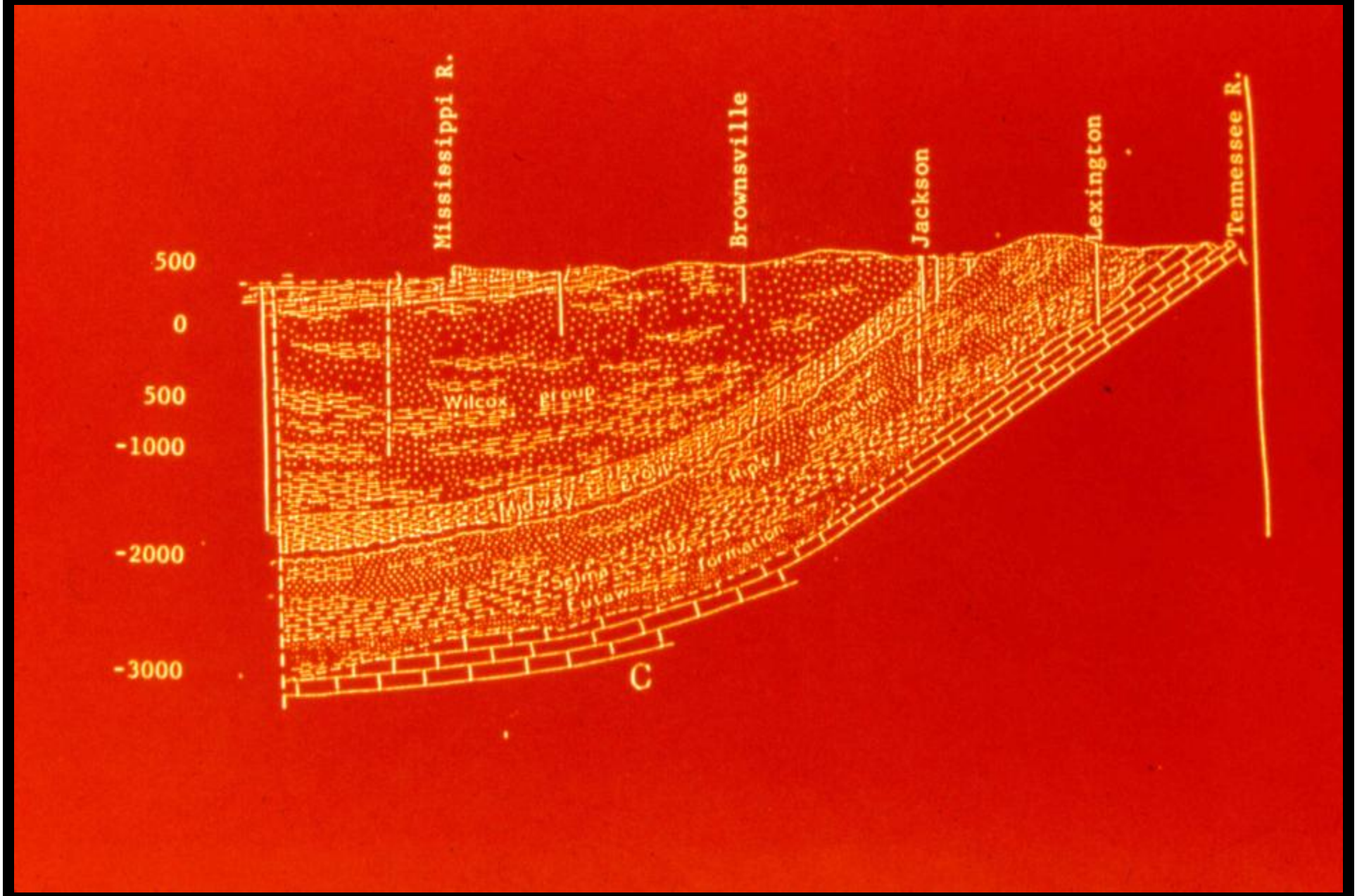
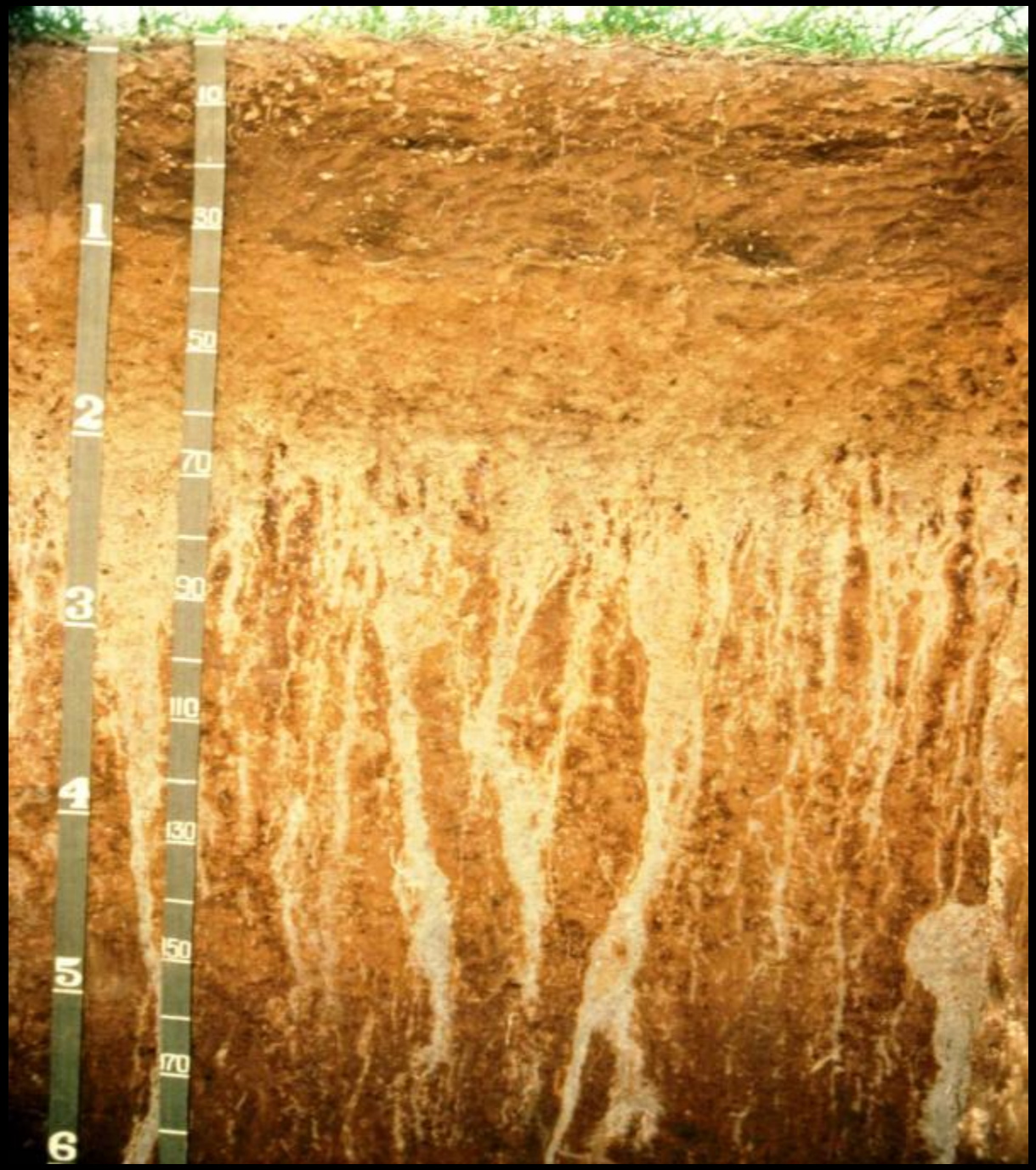
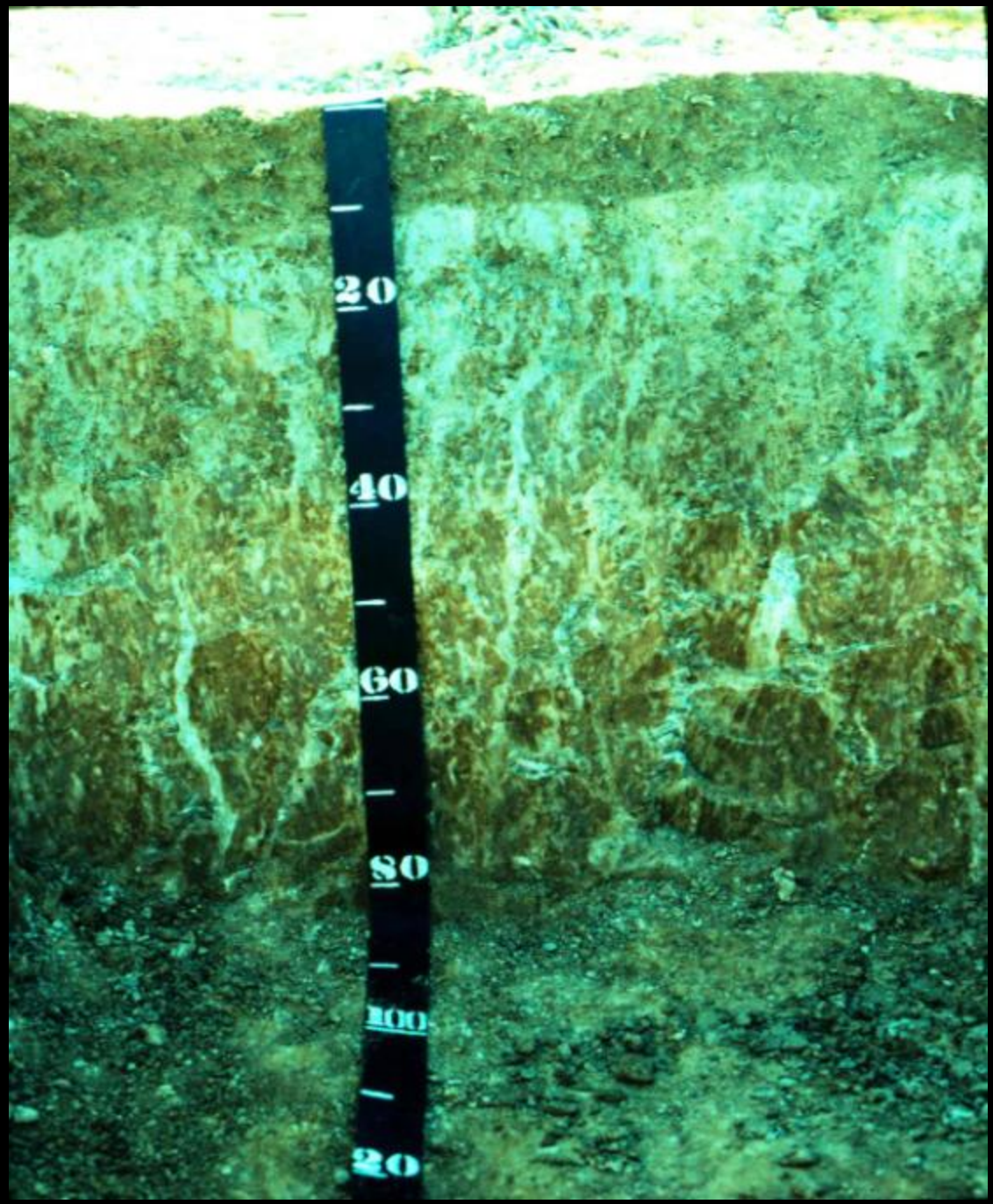

Mississippi R.
Brownsville
Jackson
Lexington
Tennessee R.
500
0
500
-1000
-2000
-3000
Wilcox group
Midway
Selma
formation
C


1
2
3
4
5
6
10
30
50
70
90
110
130
150
170

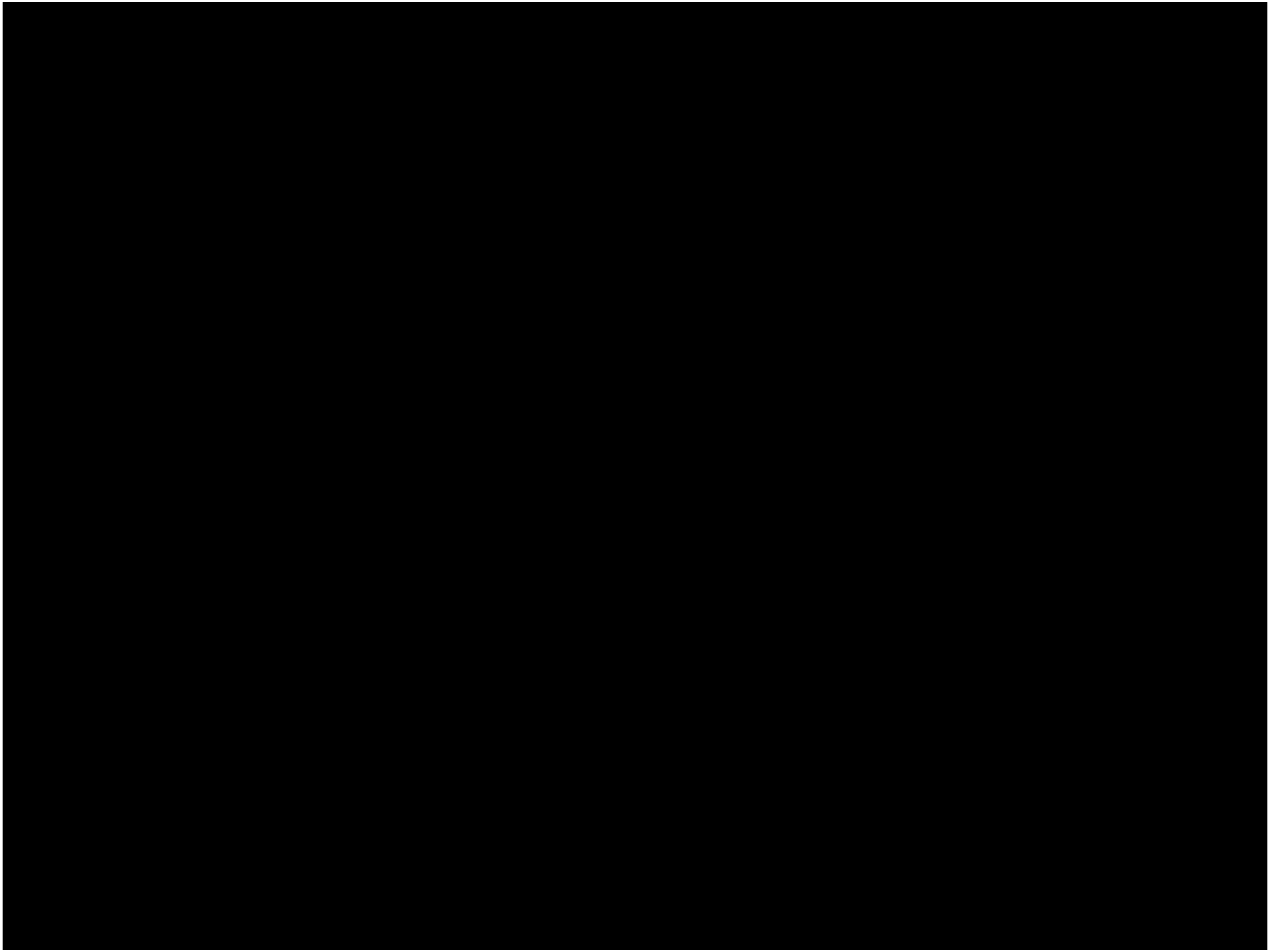
1
2
3
4
5
30
50
70
90
110
130
150
170

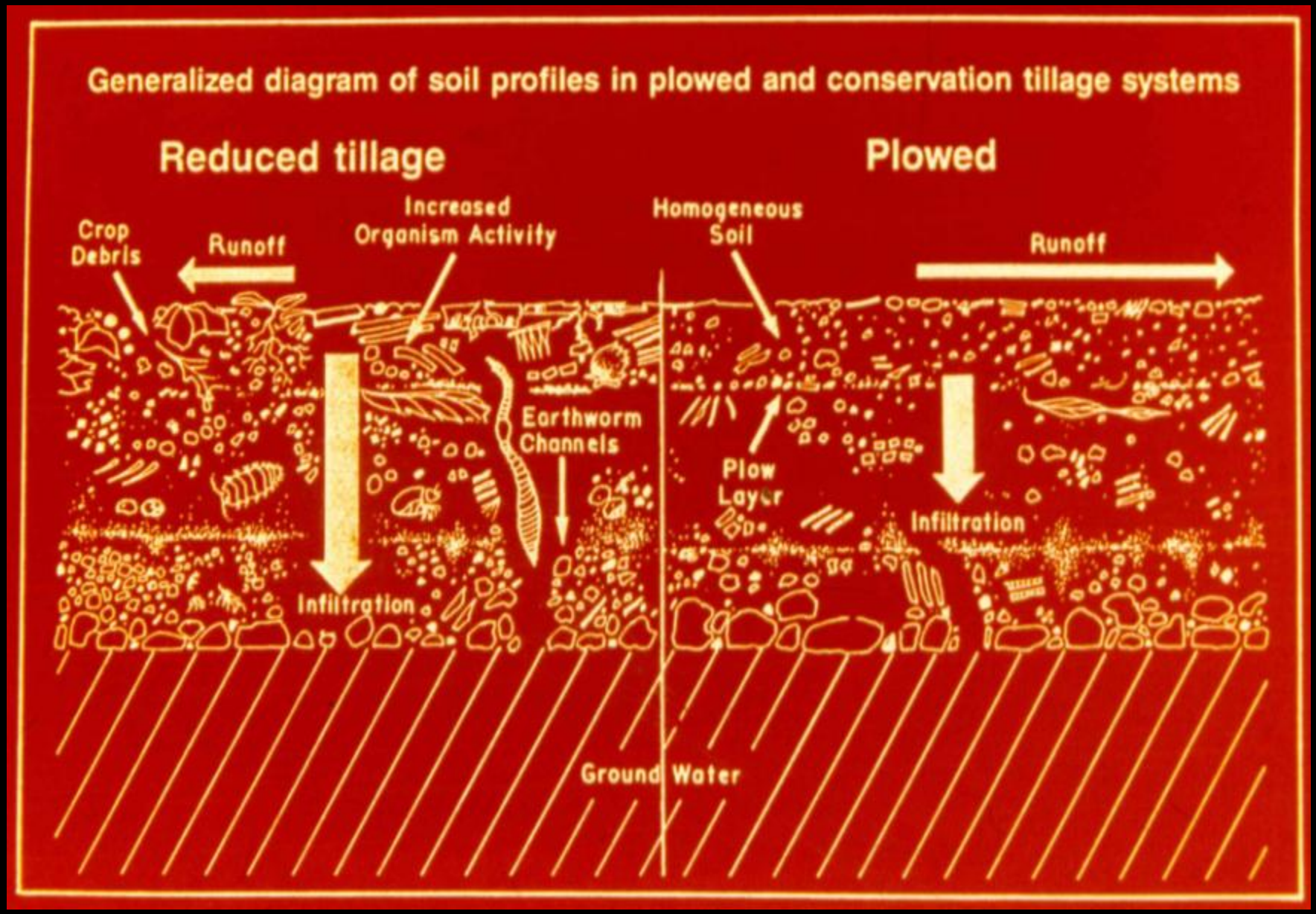
1
2
3
4
10
30
50
70
90
110
130


20
40
60
80
100
20

1984 Soybean Yields (Fayette County, Tennessee)

Depth to fragipan (inches)	Plant Height (inches)	Soybean Yield (bu/A)
42	43	42
30	39	41
22	35	36
20	28	25
15	27	21
6	21	20
0	17	7




Generalized diagram of soil profiles in plowed and conservation tillage systems
Reduced tillage
Plowed
Crop Debris
Runoff
Increased Organism Activity
Homogeneous Soil
Runoff
Earthworm Channels
Plow Layer
Infiltration
Infiltration
Ground Water

Available Water

Depth to fragipan (inches)	Available Water (inches) [1]	Days Before Stress [2]
42	8.4	25
30	6.0	18
22	4.4	13
15	3.0	9
6	1.2	4

[1] Assuming 0.2 in. H_2O/inch of silt loam soil.

[2] Assuming loss of 0.33 in. per day.