Historical Perspectives and Recommendations for revision of the Agricultural Handbook 296

Webinar March 24th 2015

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Outline

• Use of MLRA
• Historical sources and development of Major Land Resource Area’s since the 1930’s
• Data Associated with MLRA
• Recommendations for MLRA
Land Resource Areas are used for:

1. As a basis for making decisions about agricultural issues;
2. As a framework for organizing and operating resource conservation programs;
3. For the geographic organization of research and conservation needs and the data derived from these activities;
4. For coordinating technical guides within and between States;
5. For organizing, displaying, and using data in physical resource inventories;
6. For aggregating natural resource data.
LEGEND:

CONSERVATION PROBLEM SERIOUS
1 HUMID CLAY PRAIRIES
2 MISSOURI VALLEY LOESS HILLS
3 MISSOURI VALLEY GLACIATED PLAINS
4 BLACK BELT
5 TEXAS-OKLAHOMA CROSS TIMBERS
6 SOUTHERN HIGH PLAINS

CONSERVATION PROBLEM MODERATE
40 EDWARDS PLATEAU
41 SOUTH CENTRAL HIGHLANDS
42 CENTRAL GREAT PLAINS PRAIRIE

CONSERVATION PROBLEM SLIGHT
65 GULF COAST PRAIRIE
66 NORTHERN GRAY TIMBERLANDS
67 COASTAL FLATWOODS
68 RED RIVER VALLEY
1937: 80 Problem Areas
1938: 10 Regions / 56 Problem Areas, 30 subdivisions
1944: 9 Regions / 67 Problem Areas, 82 Subdivisions
1950: 9 Physiographic Regions / 155 Problem Areas

D – GREAT PLAINS
D12 – Nebraska Sand Hills
D22 – Southern High Plains

F – SOUTHWESTERN BASINS AND MOUNTAINS
F9 – Sonoran Highlands
F12 – Trans-Picos Basins, Mountains, and Plateaus
Regional Soil Surveys

Natural Land Use

Soil Conservation Problem Areas

1931 1933 1937/1950
Data Associated with MLRA

Major Land Resource Areas

Physiography  Geology  Climate  Water  Soils  Biological Resources  Land Use

Historic Maps (1946)
State & Federal Maps
Hydrologic Units (1984)
PRISM
USGS Reports
SSURGO
Many NRCS & agency reports
NRI (1997)

Queried GIS Layers

Land Resource Hierarchy

**Land Resource Region (LRR)**
- **Major Land Resource Area (MLRA)**
  - **Land Resource Unit (LRU)**
    - **Order 5+**
    - **Order 4**
    - **Order 2, Order 3**
    - **Order 1**

**Components**
- **Soil Series**
- **Pedon**

**SOIL Associations**

**LRR**: “geographically associated groups of MLRA’s”

**MLRA**: “aggregations of geographically associated LRU’s”

**LRU**: “aggregation of map units of the state soil geographic database.”
To successfully implement Ecological Sites (and all program and practices associated with MLRA)—MLRA’s and LRU’s have to be meaningful, and have to be connected to other scales of resource areas.
Recommendations for MLRA

• Become more **Scientifically Rigorous**
  - *Repeatable & Testable*

• Use the available big resource databases and other technology advances

• Quantitatively integrate across all levels in the hierarchy

• Evaluate concepts of Climate Change, land-use

• Make MLRA’s more than lines on a map
A climate, a plant community or a soil, in the sense of an individual, is a ... section of the landscape with a range in characteristics set by our logic, not by nature.

~E.J. Dyksterhuis, 1958