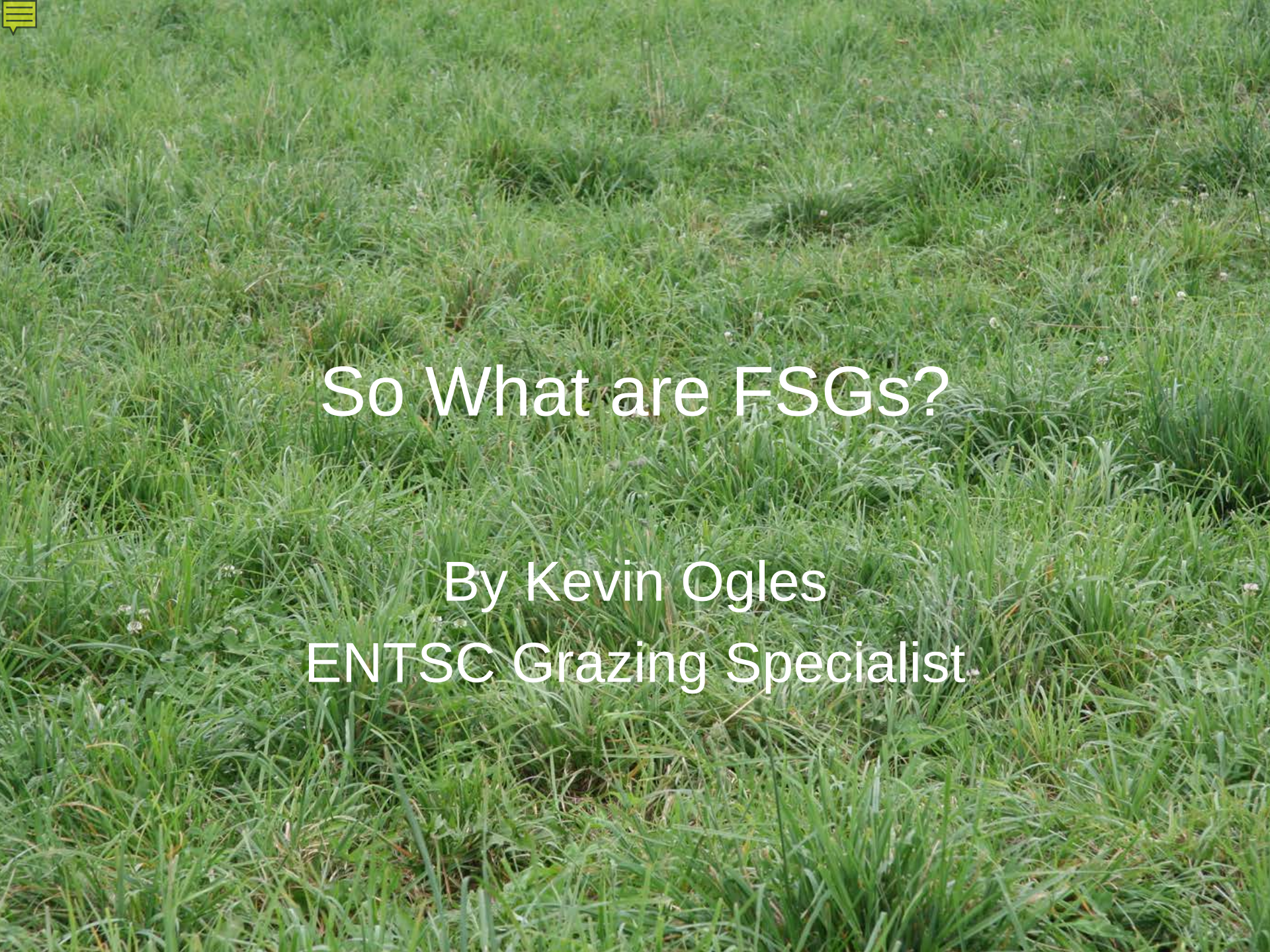


So What are FSGs?

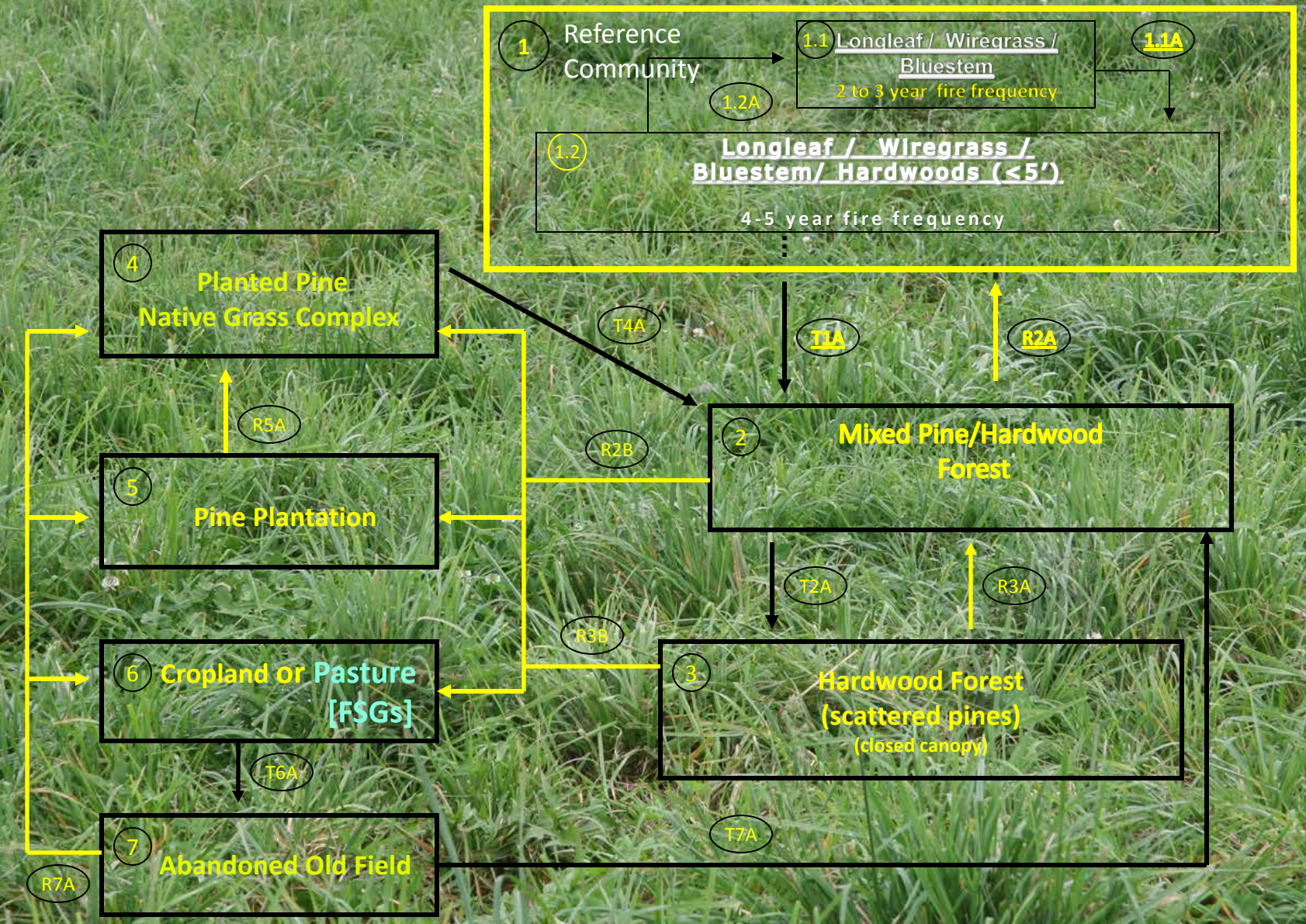
By Kevin Ogles

ENTSC Grazing Specialist


Types of Definitions
‘Big Picture’
Technical
Planning Purposes

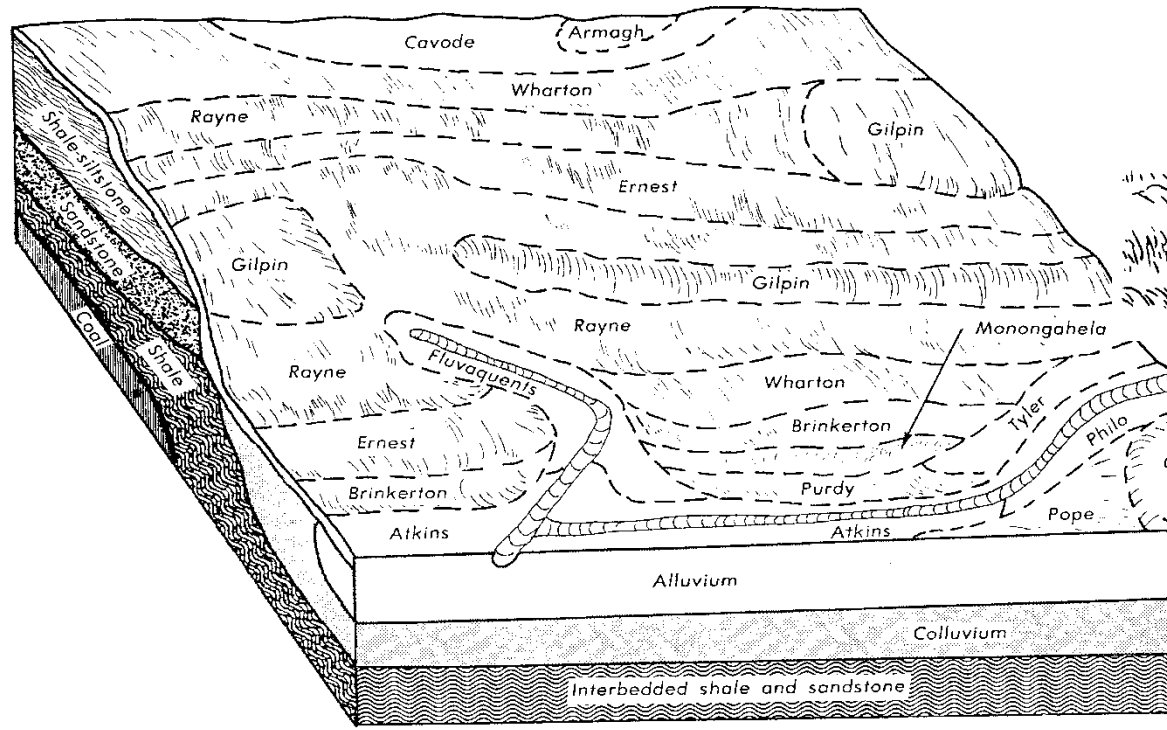
‘Big Picture’

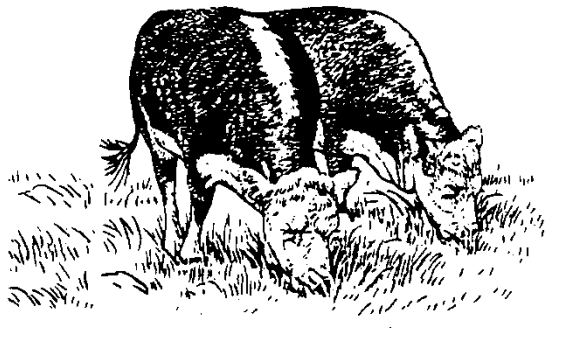
MLRA R153A001GA - Longleaf Pine/Wiregrass Savanna



FSG Technical Definition

A group of soils that have similar agronomic properties, such that the soils in the group have the capacity to support comparable yields of the same forage species and require similar treatment and management to optimize those yields..





A Forage Suitability Group IS

- Sufficiently Uniform to:
  1. Support the same adapted forage plants under the same management conditions

A Forage Suitability Group IS

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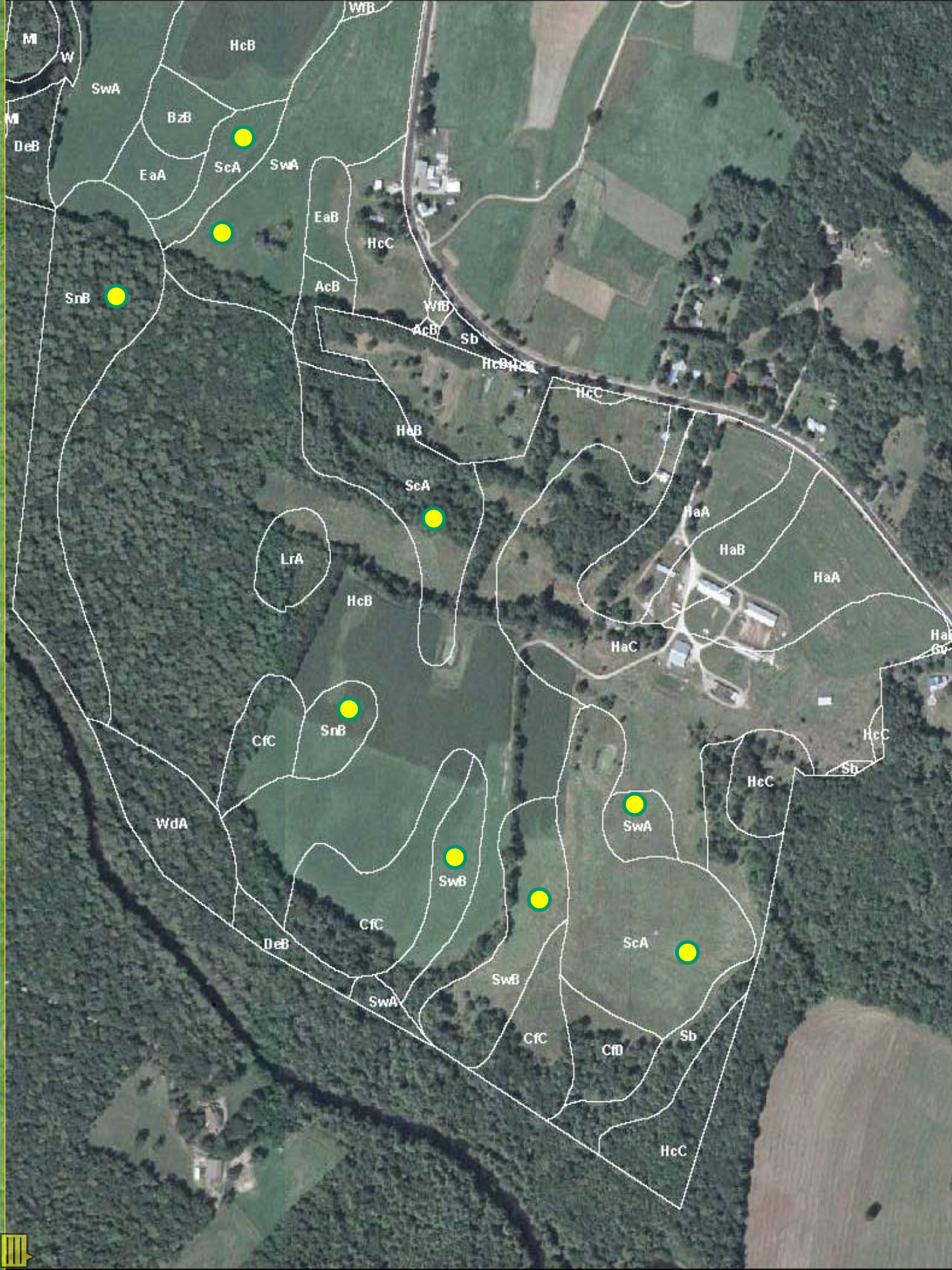
  2. Require similar conservation treatments to produce the same adapted forages at the same respective quality

A Forage Suitability Group IS

- Sufficiently Uniform to:
  1. Support the same adapted forage plants under the same management conditions
  2. Require similar conservation treatments to produce the same adapted forages at the same respective quality
  3. Those Forages Will Have very similar ‘potential’ productivity


M
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SwA
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DeB
BzB
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ScA
SwA
HcB
WfB
EaB
HcC
AcB
SnB
WfB
AcB
Sb
HcC
HcC
HaB
ScA
LrA
HcB
HaA
HaB
HaA
HaC
Ha
Sb
HcC
Sb
HcC
SnB
CfC
WdA
SwA
SwB
CfC
DeB
SwB
ScA
SwA
CfC
CfD
Sb
HcC

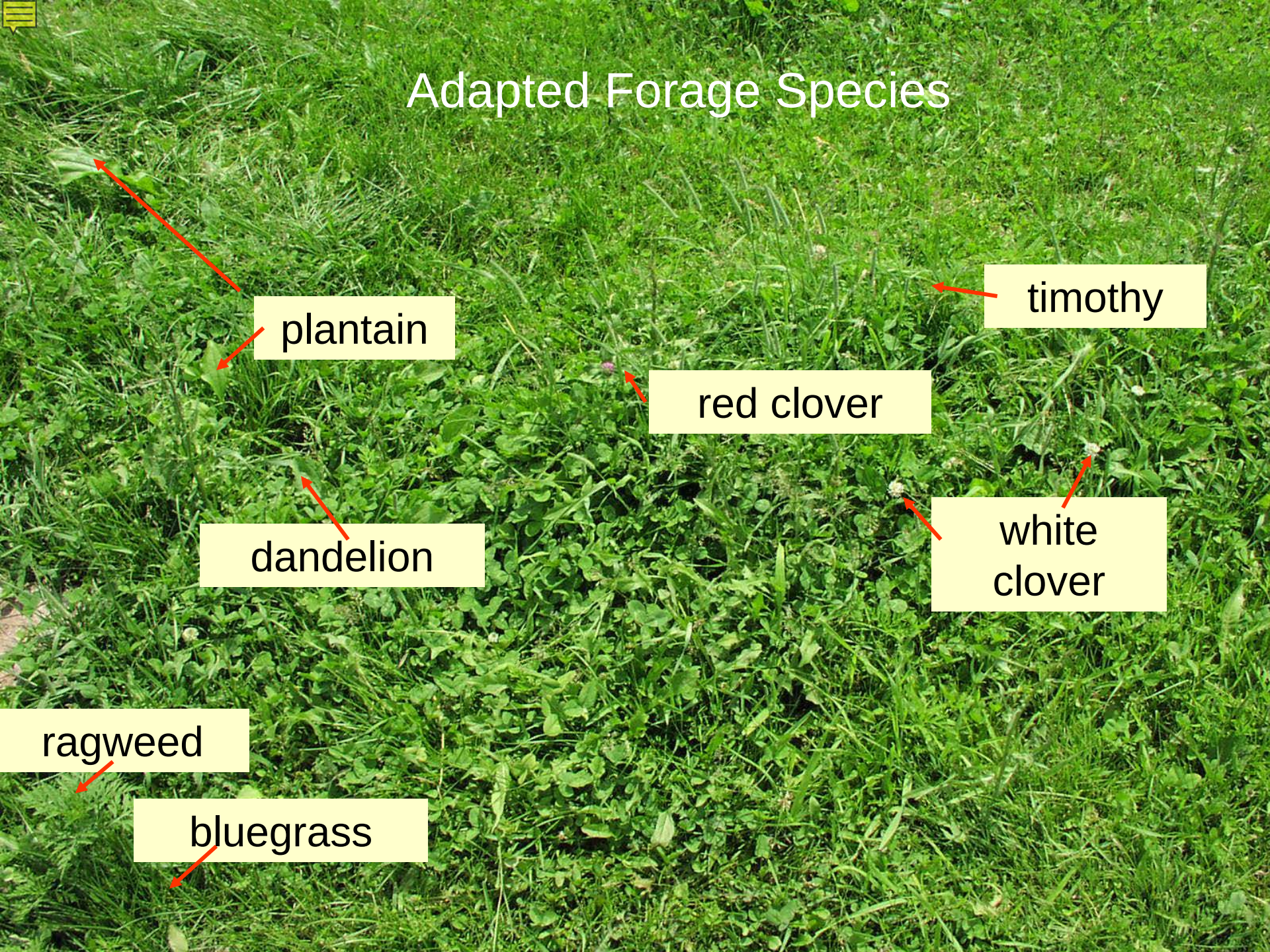

Why Do I Need Forage Suitability Groups?

How Do We Get Forage Information Now to Do Planning on Pastureland?

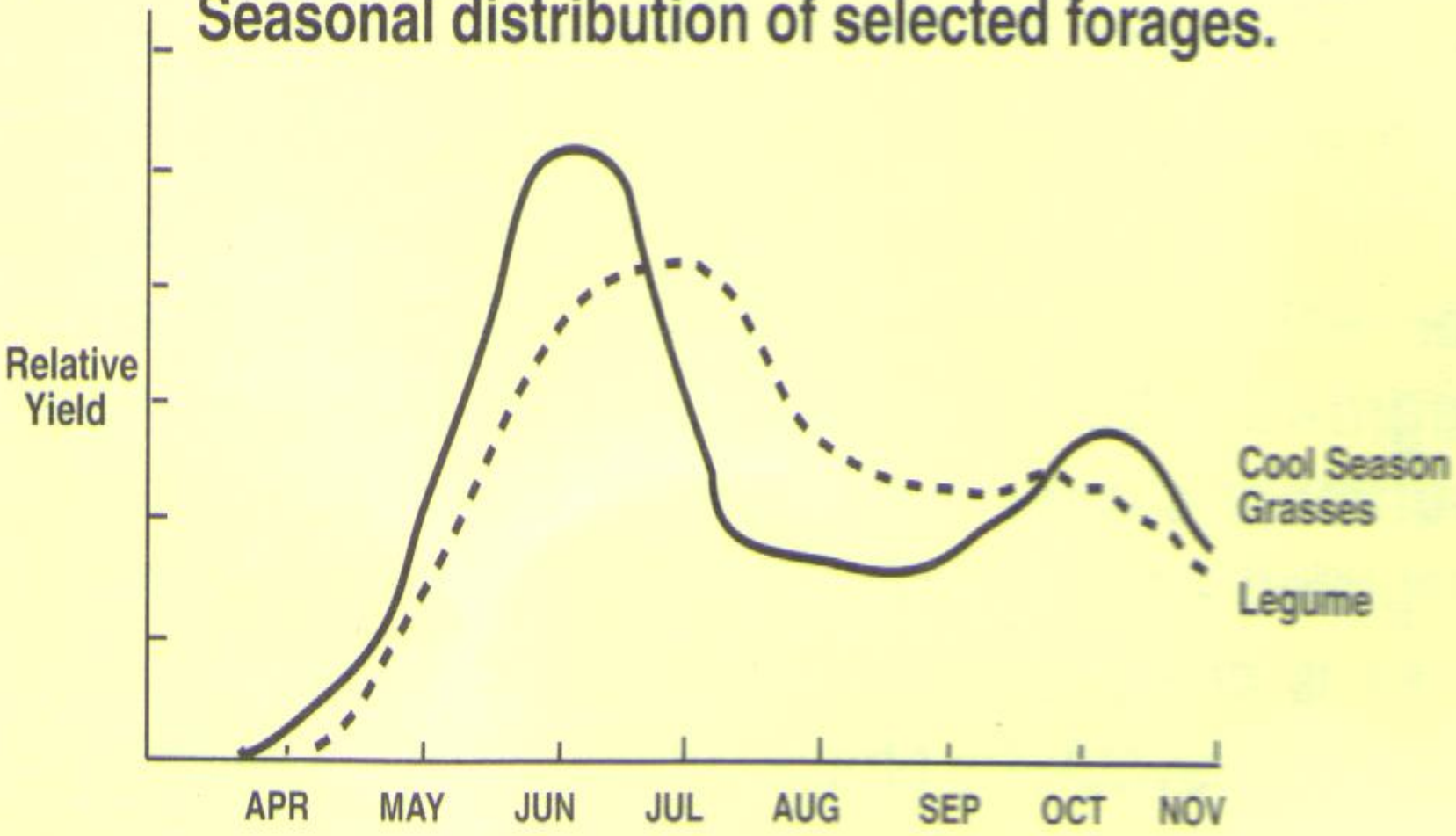
By Specific Farm/Ranch

- Obtain Soils Information
- Determine the soils' Limitations and Management Needed to grow Forages, and which Forages are adapted to them
- Use Growth Information if Available (Land Grant)or By Expert Knowledge (my DC)
- Determine Yields of Forages – Soil Survey, On Farm or On Nearby Farms
- Then see how these line up with the Forage Goals of the Manager

The different kinds of soil used to name map units have sets of interrelated properties that are characteristic of that soil as a natural body. A soil map delineates areas occupied by different kinds of soil, each with a unique set of properties and characteristics.


Adapted Forage Species
plantain
timothy
red clover
dandelion
white clover
ragweed
bluegrass

Seasonal distribution of selected forages.



Adapted from "Grazing Systems for Beef Cattle," James Gerrish

FIGURE 4

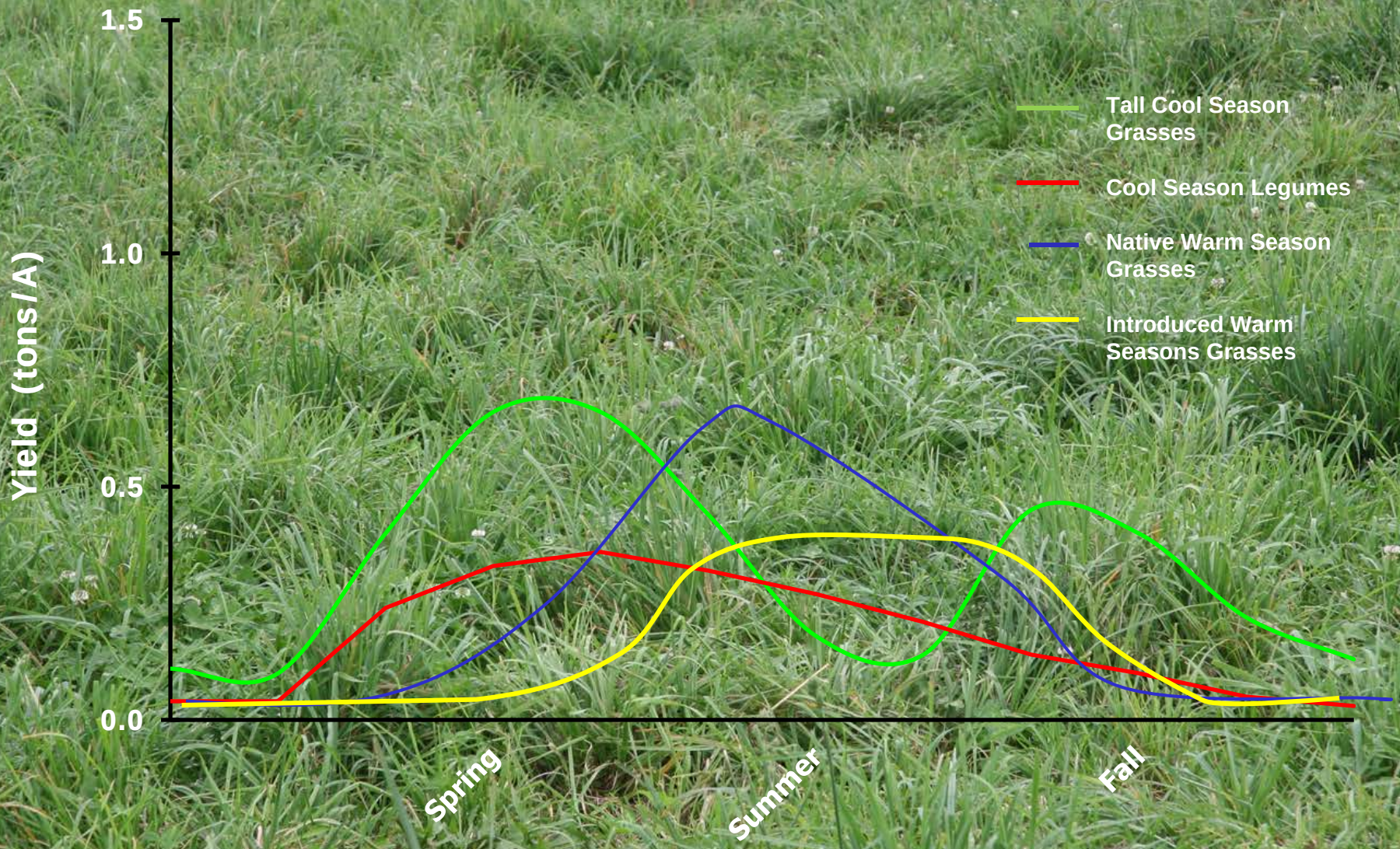
Examples of Yield and Distribution Information

	Total	Percent of Total Yield Available in Each Month							
Pasture Type	Yield	% April	% May	% June	% July	% Aug	% Sept	% Oct	% Nov
NORTH ZONE									
Alfalfa	4.70	5	20	25	20	12	5	13	0
Alfalfa/grass	3.40	3	28	26	18	12	0	13	0
Birdsfoot Trefoil	3.00	2	10	38	28	15	0	5	2
Birdsfoot Trefoil/Grass	3.00	4	10	35	25	17	4	5	0
Brdsft.Trefoil/Ladino Clov.	2.60	2	15	38	23	10	0	8	2
Chicory	2.30	0	10	50	30	10	0	0	0
Cool Season Grass Mix	3.10	5	25	35	10	10	10	5	0

More Examples

STATEWIDE Growth Curve Values												
Species / Mix	1-Apr	1-May	1-Jun	1-Jul	1-Aug	1-Sep	1-Oct	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar
OrchGrass	8%	24%	24%	14%	12%	8%	7%	3%	0%	0%	0%	0%
Fescue	11%	25%	21%	7%	5%	13%	9%	5%	3%	0%	0%	0%
SmBrome	9%	31%	29%	4%	3%	10%	10%	4%	0%	0%	0%	0%
Alfalfa	2%	20%	25%	20%	20%	13%	0%	0%	0%	0%	0%	0%
Alf/Grass	3%	28%	26%	18%	18%	7%	0%	0%	0%	0%	0%	0%
Wheat	33%	44%	0%	0%	0%	0%	0%	23%	0%	0%	0%	0%

Yield Distribution / Growth Curves



Final Example

Height		Ave. Density* Pasture lbs DM / ac		Low Density Pasture lbs DM / ac		High Density Pasture lbs DM / ac
8"		2600		2200		2800
6"		2400		2100		2600
4"		1800		1500		2100
2"		1200		1000		1400
1"		900		600		1000

Measuring Forage on Site

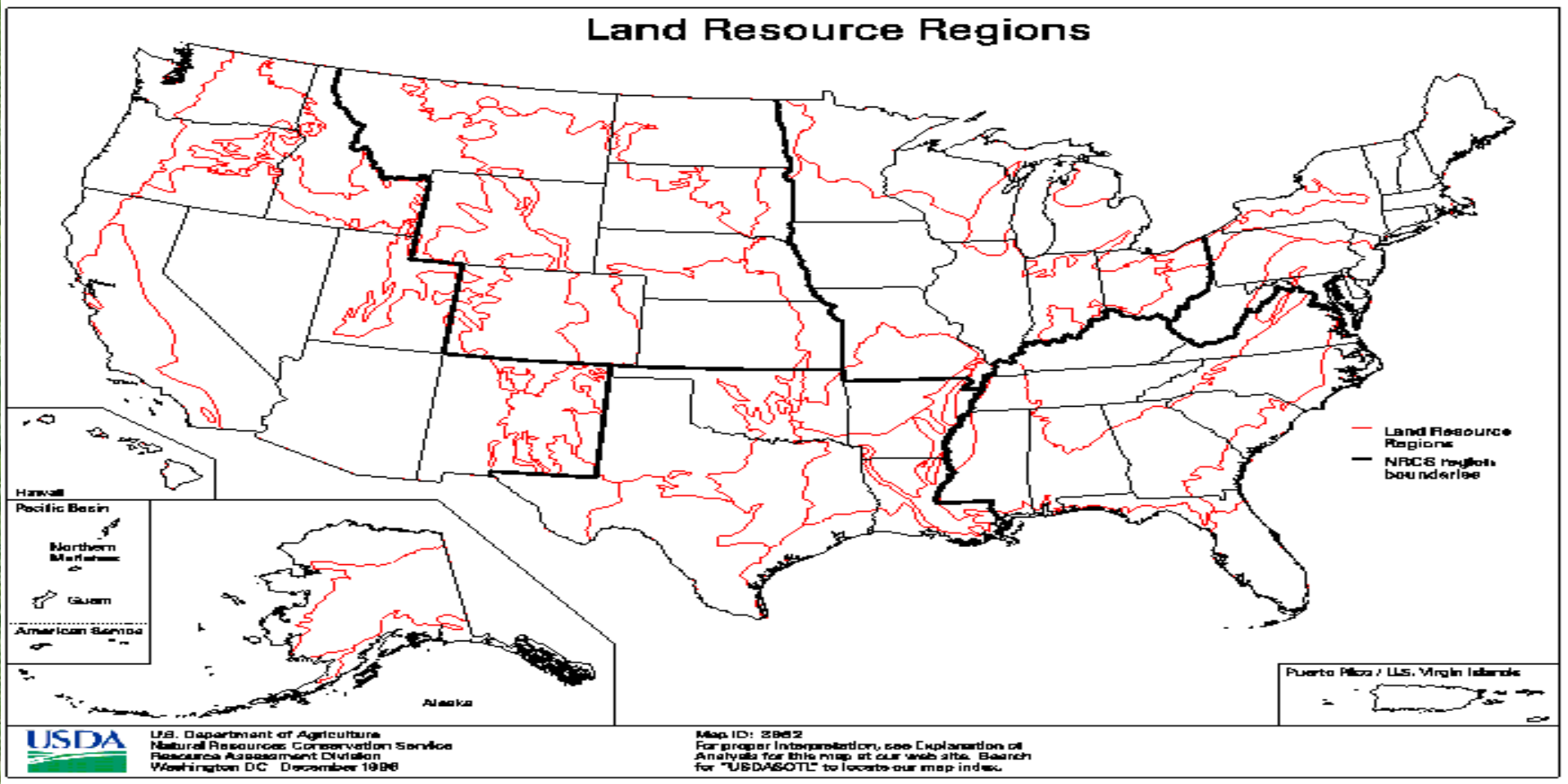

RANCHER

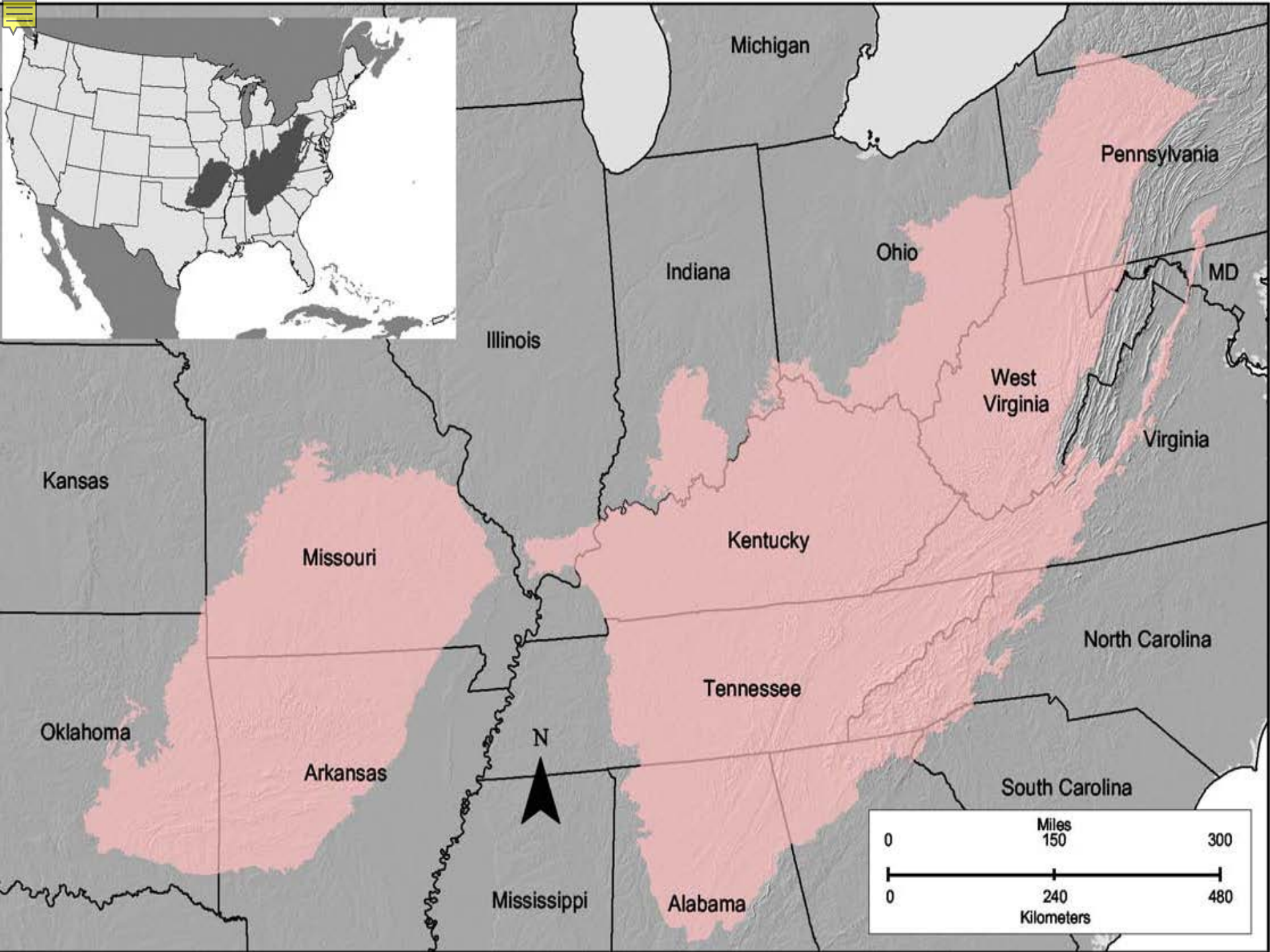

How Are They Organized?
By Major Land Resource Areas (MLRAs) and/or Land Resource Units (LRU)

Land resource regions (LRR)

•are geographically associated groups of major land resource areas and consist mainly of areas that have a broadly related pattern of soil, climate, water resources, and land use.

• Land resource regions are unique, continuous delineations, which approximate physiographic regions.




Michigan
Pennsylvania
Ohio
Indiana
MD
Illinois
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Virginia
Virginia
Kansas
Missouri
Kentucky
North Carolina
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Arkansas
South Carolina
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Alabama
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240
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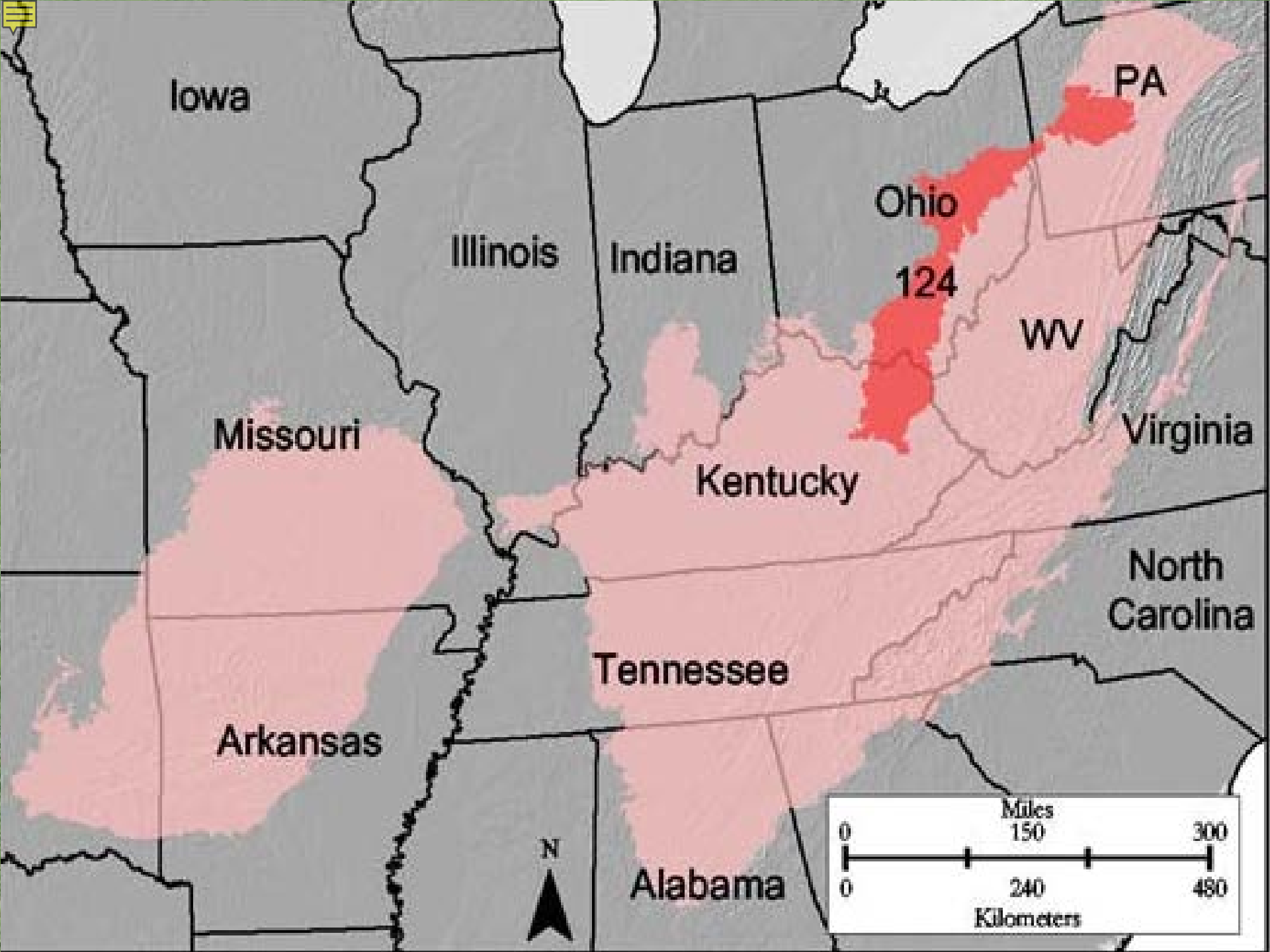
Kilometers


Iowa
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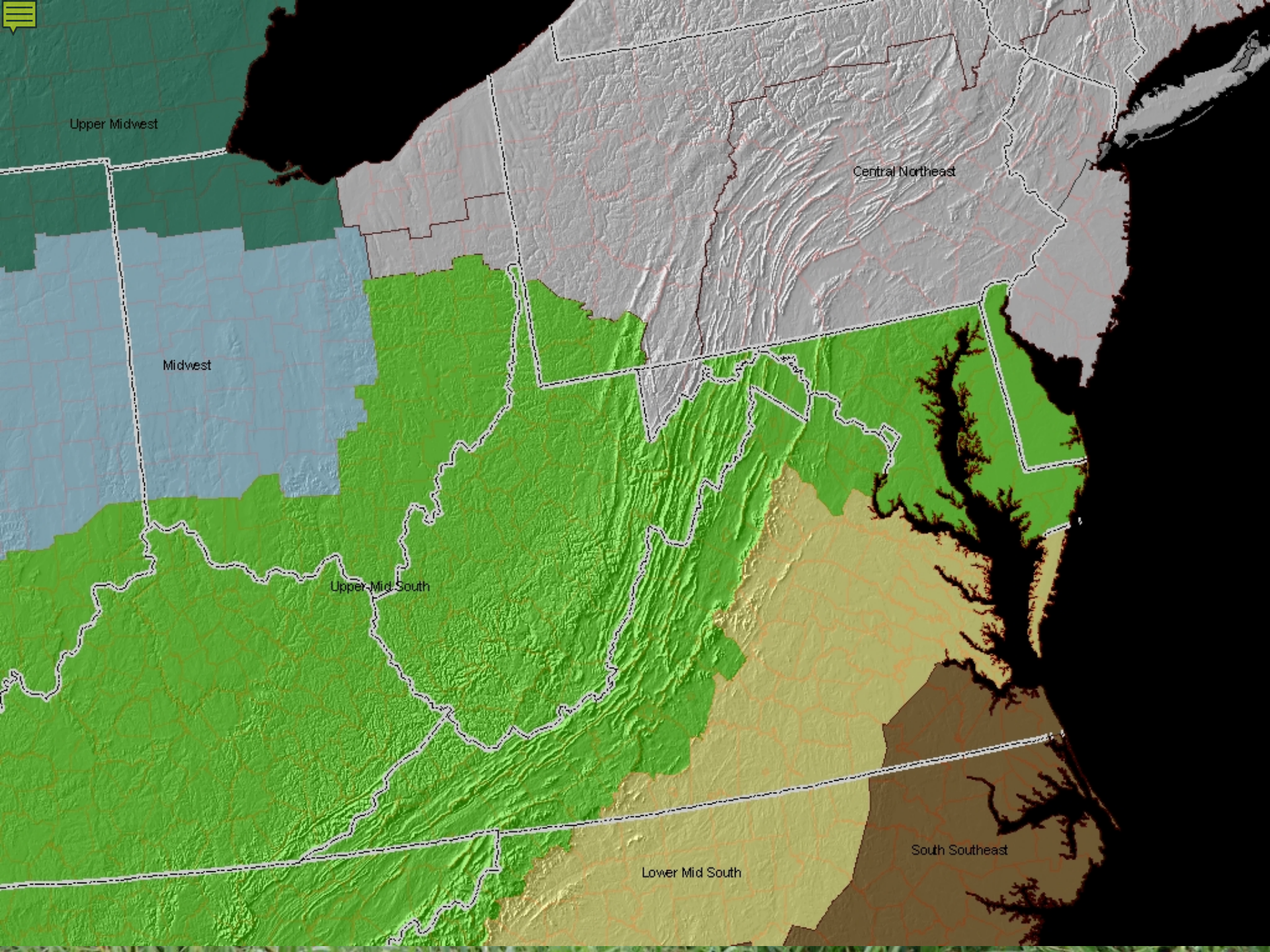
Forage Suitability Groups

Using Plant Hardiness Zone Information


Upper Midwest
Central Northeast
Midwest
Upper-Mid South
South Southeast
Lower Mid South

Factors Affecting Forage Growth - Soils are Sorted by Their Characteristics

- **Slope**
- **Drainage Class (Few forage plants grow well from VPD to ED)**
- **AWC**
- **pH below the plow layer**
- **Frost Heave Potential**
- **Surface Rock Fragments - % Surface covered and management implications**
- **CEC and Organic Matter – Fertility**
- **Depth to Restrictive Layers**
- **Shrink-Swell**

Landscape and Climate Characteristics associated with a Soil are Included

- **Flooding – both occurrence and duration**
- **Aspect**
- **Growing Season Length (GSL)**

Soil Map Units for the Specific FSG Are Listed

G124UMSC3OH

Soil Series

Algiers
Euclid
Holly
Killbuck
Melvin
Newark
Orrville
Papakating
Piopolis
Shoals
Stendal
Wabash
Wabasha
Warners
Wayland

A Forage Suitability Group Description will give the planner access to:

Appropriate General Agronomic and Grazing Management Information is listed in

MANAGEMENT IMPLICATIONS

The Adapted Forage Species to That Group of Soils G124UMSC3OH Are Listed

Orchardgrass

Red Clover and Grass

Smooth Bromegrass

Switchgrass

Tall Fescue

Timothy

Birdsfoot Trefoil and Grass

Kentucky Bluegrass

FORAGE GROWTH CURVES
Yield Distribution

Each month the percent of annual forage production (yield distribution) for each forage species, or a mix of forage species, is obtained to assist in planning grazing and hay production systems.

Monthly Distribution of Pasture Production

Growth Curve Number: OHUMS124
Growth Curve Name: Tall CSG, Upper Mid-South RUSLE2 FPZ, MLRA 124
Growth Curve Description: Tall CSGs includes DAGL, BRIN2, LOAR10

Percent Production by Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	5	30	20	10	5	5	7	12	6	0

FSG Yields

For FSG G124UMSC3OH

Optimum (Good Management) in Pounds Per Acre

Switchgrass	6600
Tall Fescue	8600
Kentucky Bluegrass	6700
Timothy	6700
Orchardgrass	8600
Red Clover & Grass	8000

Forage Suitability Groups

Using Plant Hardiness Zone Information

Draft Forage Suitability Group
G124UMSC3OH

Group of Soils Are:

- Wet due to high Water Table or Brief Flooding
- VPD, PD, or SPD
- Medium to Fine Surface textures
- AWC moderate to very high
- Slopes 0 to 3 percent

Growing Season Length is 155 to 200 days, Avg. 180

Rainfall 37 to 50 inches annually, Avg. 42 inches

Temperatures Avg. 46 to 56 degrees F

Forage Suitability Group Description

Which Contains:
Adapted Forage Species
Forage Yields by Management
Forage Growth Curves for Adapted Species
Soil and Management Implications Information
as it affects those forages accounting for:
-Inherent Properties
-Climate
-Considerations for Grazing or Forage Harvest Management
Related Practices Affected i.e. Fence, Pipeline, Spring Development

Forage Suitability Group Management Implications are given for the soil and site conditions specific to that FSG.

These can assist with:

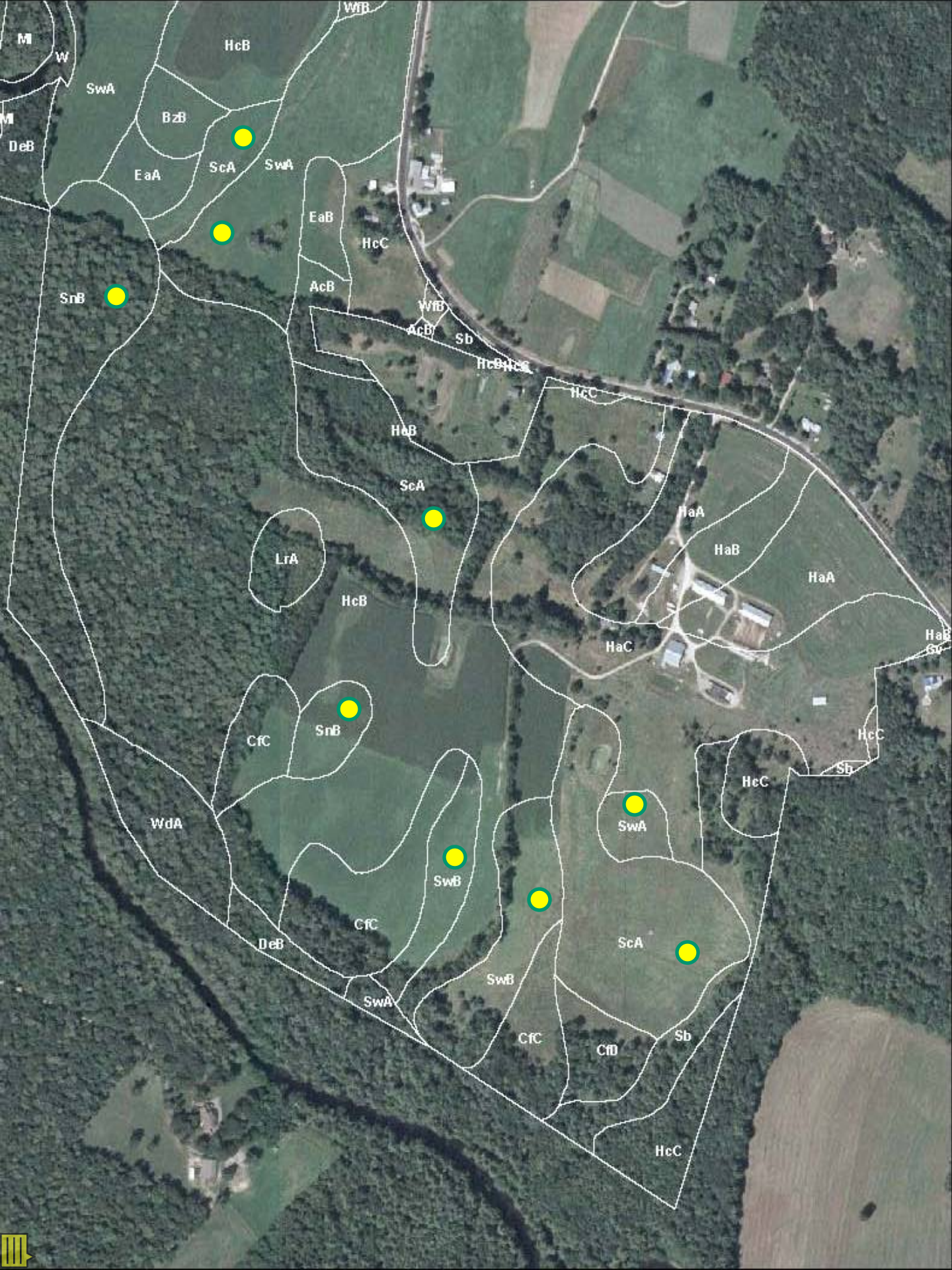
-Grazing Management

-Soil Amendment and Fertility management

-Pasture Forage Species Planting Recommendations

-Fence and Laneways Siting Recommendations

-Watering Facility and Pipeline Siting Recommendations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WfB
AcB
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SnB
Sb
HcC
WdA
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DeB
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SwB
SwA
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CfD
Sb
HcC

Forage Suitability Groups Are A Tremendous Asset in High Quality Planning on Pastures of the United States!

QUESTIONS?

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East National Technology Support Center
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