Seeding Mixes for Pastures

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Start by planting fenceposts
Increasing pasture resilience through diversity

- Species diversity within and among paddocks
- Functional group diversity (grasses, legumes, forbs/broadleafs)
- Grass and legume structure
- Warm and cool season grasses
- Varying grazing/haying management
  - stockpiling
  - haying
  - outwintering
Forbs

• Chicory

• Plantain
Selecting Grass Varieties

• If purchasing a pre-made pasture mix
  – Watch out for tall fescue
  – Consider having a custom blend made

• Variety selection
  – High yielding varieties
  – Winterhardiness
  – Medium to late maturity
  – Consistent yield throughout the growing season
  – Rust resistance
  – Palatability
New Tall Fescues

- Endophyte-Free
- Novel-Endophyte
- Soft-Leaf
Know your soils

Poorly Drained
- Clay
- Silty Clay
- Clay Loam
- Silty Clay Loam

Well-Drained
- Silt Loam
- Sandy Clay
- Sandy Clay Loam
- Loam
- Silt

Droughty
- Sandy Loam
- Loamy Sand
- Sand
What are your needs?

- Soil type and landscape factors
- Livestock nutritional needs
- Hay, pasture, both?
- Heavy or frequent use (holding areas close to the barn?)
How we diversify pastures

- Hayfield
- Main-season pastures
- Stockpile
- Outwintering area
- Calving pastures
Broadly Adapted Species

- Orchardgrass
- Quackgrass
- Meadow Fescue
- Kentucky Bluegrass

- Red Clover
- Ladino Clover
Meadow Fescue
Grasses and Legumes for Poorly Drained Soils

- Reed Canarygrass
- Timothy
- Tall Fescue
- Meadow Fescue

- Alsike Clover
- Ladino Clover
Grasses and Legumes for Droughty Soils

- Alfalfa
- Orchardgrass
- Reed Canarygrass
- Smooth Bromegrass
- Warm Season Grasses
Forage Quality Needs of Livestock Classes

- Stocker cattle
- Growing lambs & kids
- Nursing mare
- Hard working horse
- Beef cow & calf
- Ewe with lamb
- Doe with kid
- Ewe/doe, not lactating
- Idle horse

Relative Forage Quality

Forage Quality Needs of Livestock Classes

Protein needs of ruminants

- Lactating cows need pasture protein levels of 16 to 18%.
- Growing animals (steers and heifers) need protein levels of 10 to 12%.
- Many well managed pastures have protein levels that are too high.
Pasture quality is 1 part species composition and 9 parts MANAGEMENT

- 30 days
- 1 paddock

Rest-Rotation Continuum

- 30 days
- 30 paddocks

• Higher quality
• Higher yield
• More diversity
• More flexibility
High Quality Dairy Pasture

High protein, high energy

A short-term, high quality pasture:

- Perennial or annual ryegrass and ladino clover

A permanent pasture adapted to frequent rotation:

- Meadow fescue
- Disease resistant, late-maturing orchardgrass
- Ladino clover
Growing steers and heifers  
*Moderate protein, high energy*

**Perennial cool-season**
- Cool season perennial grasses adapted to location
- Red clover

**Native warm season pasture**
- Mix of big bluestem, indiangrass, switchgrass
- Red clover, birdsfoot treefoil

**Annual pasture**
- Sorghum-sudangrass
- Brassicas
- Small grains
- Cocktail mixes

Manage for lower protein, higher digestible fiber
Small Ruminants & Horses

- Include species tolerant of short grazing
- Moderate quality

- Orchardgrass
- Kentucky bluegrass
- Perennial ryegrass
- Ladino clover
- Birdsfoot trefoil or chicory

- Avoid red clover for sheep pastures (phytoestrogens)
- Consider trefoil or chicory for anti-parasite benefits
Mixed use pastures

Hay & Pasture
- Alfalfa
- Orchardgrass
- Smooth brome?
- Avoid red clover

Heavy or frequent use area
- Kentucky bluegrass
- Tall fescue
- White clover
Creating a Custom Pasture Mix
Base Seeding Rates

<table>
<thead>
<tr>
<th>Grasses</th>
<th>Lb/a</th>
<th>Legumes</th>
<th>Lb/a</th>
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<tr>
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<td>Festulolium</td>
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<td>Alsike Clover</td>
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<tr>
<td>Meadow Fescue</td>
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<td>Birdsfoot Trefoil</td>
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<td>Tall Fescue</td>
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<td>Chicory</td>
<td>5</td>
</tr>
<tr>
<td>Timothy</td>
<td>8</td>
<td>Plantain</td>
<td>10</td>
</tr>
</tbody>
</table>
Creating a Custom Pasture Mix

Adjustment Factors

- Choose desired species.
- Adjust base rates for proportions desired in final mix.
- Adjust for poor seedbed conditions: add 25%.
- Adjust for poor weather conditions: add 50%.
Creating a Custom Pasture Mix
Example: Hay/Graze Mix

- Desired final mixture: 30% Orchardgrass, 30% smooth brome, 40% alfalfa. Seedbed conditions are good, but weather conditions are poor.

- Orchardgrass: $10 \text{ lb/a} \times 1.50 \times 0.30 \ (30\%) = 5 \text{ lb/a}.$
- Smooth brome: $16 \text{ lb/a} \times 1.50 \times 0.30 = 7.2 \text{ lb/a}.$
- Alfalfa: $15 \text{ lb/a} \times 1.50 \times 0.40 = 9.0 \text{ lb/a}.$
Creating a Custom Pasture Mix
Example: Low, Wet Soil

• Desired final mixture: 33% reed canarygrass, 33% alsike clover, 33% timothy. Seedbed conditions are poor, but weather conditions are good.

• Reed canarygrass: 6 lb/a x 1.25 x 0.33 = 2.5 lb/a.
• Alside Clover: 4 lb/a x 1.25 x 0.33 = 1.7 lb/a.
• Timothy: 8 lb/a x 1.25 x 0.33 = 3.3 lb/a.
Pasture productivity is the key to profitability....

Management is the key to pasture productivity.