2013 Georgia Grazing School:
Tying it All Together: Measure, Monitor, and Manage

Tying it All Together:
Measure, Monitor, and Manage

Dr. Dennis Hancock
Extension Forage Agronomist
Crop and Soil Sciences – UGA

Grazing School Goals:
1. Provide a more comprehensive coverage of grazing management.
   • "Unlearn" much of the conventional wisdom about grazing.
2. Provide you the tools to develop a more efficient grazing system.
3. Encourage you to reduce your hay feeding to less than 60 days.

“How does your forage grow?”

Lag
Linear
Stationary

Available Forage (dry mass/unit area)

Days of Growth

The 3Ms of Grazing Management

• Measure how much forage is on offer,
• Monitor the growth rate of the forage, and
• Manage how much forage is allocated to the herd.

Tracking Forage Availability

Grazing Stick

<table>
<thead>
<tr>
<th>Forage</th>
<th>STAND RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Thin</td>
</tr>
<tr>
<td>---</td>
<td></td>
</tr>
<tr>
<td>Bermudagrass</td>
<td>80-200</td>
</tr>
<tr>
<td>Fescue</td>
<td>50-150</td>
</tr>
<tr>
<td>Fes. + Clover</td>
<td>50-125</td>
</tr>
<tr>
<td>Ryegrass</td>
<td>100-200</td>
</tr>
<tr>
<td>Small grain</td>
<td>100-150</td>
</tr>
</tbody>
</table>

Tracking Forage Availability

• Rising plate meter
  • (falling plate)

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The Primary Calculations

\[
\text{Acres Grazed per yr} = \frac{\text{Paddock Size} \times \text{Number of Paddocks}}{\text{Animal Weight} \times \%\text{DMI} \times \text{Head x Days in Paddock}} \times \frac{\text{Rationed Forage} \times \text{Grazing Efficiency} \%}{\text{Days in Paddock} + 1}
\]

Grazier’s Arithmetic: A Grazing Calculator

Evaluating the Different Grazing Systems

Analyzing Strategic Changes

How Much Hay Do I Need?

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Effect of Grazing System on Hay Needs

Costs of Feeding Hay

\[
\text{1500 lbs/cow} \times \frac{2.0 \text{ lbs of hay}}{100 \text{ lbs of b.w.}} = 30 \text{ lbs/hd/d} \\
\times \frac{\$100/\text{dry ton of hay}}{2000 \text{ lbs}} = 0.05/\text{lb of hay} \\
= \$1.50/\text{hd/d}
\]

Also, subtract an average of:
- 15% feeding loss
- 30% storage loss
- 15% other losses

\[
\text{\$1.75 - \$2.00 per head per day}
\]

Our Challenge to You:

“The 60-Day or Less Challenge”
- Step 1) Adjust your system to allow for 30 fewer days of hay feeding
- Step 2) Adjust your system so that you are feeding hay less than 60 days/yr.
- Step 3) Determine if you can further reduce your hay feeding.

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Winter Annuals

THE UNIVERSITY OF GEORGIA
COLLEGE OF AGRICULTURAL & ENVIRONMENTAL SCIENCES
Stockpiling Tall Fescue or Bermudagrass

**“Average” Expectations**

**INPUTS**
- Moisture
- N fertilizer (up to 60#/ac for TF; up to 80# for BG)
- More than typical grazing management
  - Improved bermudagrass

**OUTPUTS**
- 1500-3500+ lbs of standing dry matter (DM)/acre.
- 30 – 60 days (more or less, depending on grazing method and weather)
- CP levels starting in 8 – 12% range, ending below 10%
- TDN levels ranging 55-58%

### Stockpiling Tall Fescue or Bermudagrass 

**Steps Involved**

1. Graze or take hay cutting (2-3”)
   - TF: Early to mid-Sept.
   - BG: about 6-8 wks prior to first anticipated frost.
2. Add fertilizer like making a hay cutting.
3. Don’t allow it to be grazed (if possible) until:
   - TF: After Thanksgiving
   - BG: After first killing frost

4. Measure amt. of stockpiled forage that is available.
5. Take forage samples to determine supplement need.
6. Only let them have small strips (no more than 2-3 days worth) at a time (frontal grazing).
   - Each 1200 lb cow will need ~35-40 lbs of stockpile/day
   - Allow access to mineral, ionophore, and supplement as needed.

**Grazing Methods**

- **Strip-Grazing**
- **Frontal Grazing**

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Cost Comparison for Extended Grazing Options

- Stockpiled Bermudagrass
- Stockpiled Fescue
- Rye Conc. till - Drill
- Ryegrass Conc. till - Drill
- Rye/ryegrass/arrowleaf Conc. till - Drill
- Bt/ryegrass/arrowleaf/ crimson Conc. till - Drill

Grazing Crop Residue

- Very inexpensive feed
- Can last for several days
  - Frontal grazing makes for efficient utilization
- Corn residue: 1 cow/acre for 60-100 days
- Cotton residue: 1 cow/acre for 30-35 days

Grazing Cotton Residue

<table>
<thead>
<tr>
<th>Item</th>
<th>Hay</th>
<th>Standing Residue</th>
<th>Mowed Residue</th>
</tr>
</thead>
<tbody>
<tr>
<td>corn</td>
<td></td>
<td>1,354</td>
<td>1,354</td>
</tr>
<tr>
<td>cotton</td>
<td>1,369</td>
<td>1,369</td>
<td>1,369</td>
</tr>
<tr>
<td>initial weight, lb.</td>
<td></td>
<td>1,410</td>
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</tr>
<tr>
<td>final weight, lb.</td>
<td></td>
<td>1,424</td>
<td>1,424</td>
</tr>
<tr>
<td>weight gain, lb.</td>
<td></td>
<td>56</td>
<td>55</td>
</tr>
<tr>
<td>hay fed, lb/day</td>
<td>27.0</td>
<td>1.3</td>
<td>10.7</td>
</tr>
<tr>
<td>hay savings, $/day*</td>
<td>----</td>
<td>$0.90</td>
<td>$0.58</td>
</tr>
</tbody>
</table>

* Hay valued at $70/dry ton. 1 cow/acre for 44 days. Data from Plains, GA.

Grazing Crop Residue

- Check pesticide labels
- Check fence rows and weed species for poisonous plants
- No difference in animal performance between Bt and non-Bt crops.

Grazing Crop Residue

- Check pesticide labels
- Check fence rows and weed species for poisonous plants
- No difference in animal performance between Bt and non-Bt crops.

Other Winter Annuals

- Brassicas (Turnips, Rape, Swedes, Hybrids)

Forage Turnips

January 2008

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### Brassicas

<table>
<thead>
<tr>
<th>Type</th>
<th>November 30</th>
<th>January 16</th>
<th>March 16</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rape</td>
<td>812</td>
<td>2868</td>
<td>4237</td>
<td>7968</td>
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<tr>
<td>Bruyere</td>
<td>104</td>
<td>2839</td>
<td>4322</td>
<td>7778</td>
</tr>
<tr>
<td>Dwarf Essex</td>
<td>1232</td>
<td>3121</td>
<td>4305</td>
<td>8598</td>
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<tr>
<td>T-Rapier</td>
<td>1758</td>
<td>4712</td>
<td>6711</td>
<td>13123</td>
</tr>
</tbody>
</table>

### Ruminating on Some Changes?

#### Homework Assignment:
- Identify three techniques or ideas you've learned that you'd like to put into place.
- Record these on the sheet provided. (Your name is optional)
- What are five advantages of doing it?
- What are five challenges to doing it?
- Take at least one and sketch out a partial budget.

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