ART & SCIENCE OF GRAZING MANAGEMENT

Doug Spencer
Rangeland Management Specialist
Marion, Kansas
douglas.spencer@ks.usda.gov

Helping People Help the Land

Why Management-intensive Grazing (MiG)?
- Livestock “intensively graze” by nature...

Why Management-intensive Grazing (MiG)?
- Only you can “intensively MANAGE”

This is NOT the Goal!
- "Next week I’ll rotate ‘em to another neighbor’s junglying!"

What is Management-intensive Grazing?
- A goal driven approach to managing grassland resources for long term sustainability
  - Lifestyle
  - Economic
  - Environmental
  - Production
Grazing Management

- Why consider MiG or prescribed grazing?
  - Relative Cost of Feed for Ruminants (cost per lb of gain)
    - Feed Lot - $0.70-$0.80
    - Pasture - $0.40-$0.45
  - Eliminate or at least minimize the tires and iron that come between the feed and the livestock
  - Cows have 4 legs and a rumen for a reason

Fundamentals of Successful Grazing Management

- Meet the nutritional needs of the livestock from standing pasture
- Optimize pasture yield, quality, and persistence
- Maintain or enhance the natural resource base
- Integrate appropriate technology and knowledge into a practical/profitable system

Fundamentals of Successful Grazing Management

- Availability
  - Proper stocking rates
  - Plant recovery and grazing system design
- Quality
  - Proper management
  - Matching the grazer to the resource
  - Time of Use

Fundamentals of Successful Grazing Management

- Stocking rate: The number of animals or animal live-weight assigned to a grazing unit on a seasonal basis
- Carrying capacity: The stocking rate that provides a target level of performance while maintaining the integrity of the resource base
Fundamentals of Successful Grazing Management

- Proper Stocking Rate

\[
\text{Carrying Capacity} = \frac{\text{Annual Forage Production}}{\text{Average Daily Intake}} \times \text{Length of Grazing Season}
\]

Fundamentals of Successful Grazing Management

- Forage Production

\[
\text{Carrying Capacity} = \frac{\text{Annual Forage Production}}{\text{Average Daily Intake}} \times \text{Length of Grazing Season}
\]

\[
\text{Total available forage for the grazing unit}
\]

- Plant species/diversity
- Fertility – healthy soil
- Soils/suitability
- Pasture condition/health
- Complementary forage systems
- Weather

Fundamentals of Successful Grazing Management

- Utilization Rate

\[
\text{Temporal Utilization Rate} = \frac{\text{Total Forage Production}}{\text{25% Available for Grazing Animal}} \times \text{25% Environmental Loss} \times 50% \text{Remains for Grass Plant Health/Vigor}
\]

Fundamentals of Successful Grazing Management

- Factors Affecting Utilization Rate

\[
\text{Water Location}
\]

- Type of Livestock

Daily Intake – 3% of Body Weight

\[
\text{Carrying Capacity} = \frac{\text{Annual Forage Production}}{\text{Average Daily Intake}} \times \text{Length of Grazing Season}
\]

- Intake
  - 75% Availability
  - 25% Quality
- Affected by:
  - Time Spent Grazing
  - Biting Rate
  - Bite Size
**Fundamentals of Successful Grazing Management**

- **Length of Grazing Season**

<table>
<thead>
<tr>
<th>Carrying Capacity</th>
<th>Forage Production</th>
<th>Annual Forage Production</th>
<th>Seasonal Utilization Rate</th>
<th>Average Daily Intake</th>
<th>Length of Grazing Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cow-calf, sheep, goats, horses</td>
<td>think 365 days</td>
<td>Grass-based dairy</td>
<td>240-270 days</td>
<td>Short-season stockers</td>
<td>90-240 days (flexibility)</td>
</tr>
</tbody>
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- **Optimize pasture yield, quality, and persistence**

- **PHASES OF PLANT MATURITY**

- **LITTLE BLUESTEM**

- **Maintain or enhance the natural resource base**

  - Soil
  - Water
  - Air
  - Plants
  - Animals
  - Humans/Energy

- **Energy Capture & Flow**

  - Sunlight
  - "Energy"
Fundamentals of Successful Grazing Management

- Maintain or enhance the natural resource base

OR

Fundamentals of Successful Grazing Management

- Maintain or enhance the natural resource base

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Fundamentals of Successful Grazing Management

- Maintain or enhance the natural resource base

March 2009

OR

December 2013

Fundamentals of Successful Grazing Management

- Meet the nutritional needs of the livestock from standing pasture
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Goals of the Workshop:

- Provide Ideas on Inventorying Your Current System
- Offer Realistic Ways of Intensifying your MANAGEMENT
- Network & Answer Questions

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