Introduction to Management-intensive Grazing
Art and Science of Grazing

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Art of Grazing

Why Management-intensive Grazing (MiG)?

- Livestock “intensively graze” by nature
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Only you can “intensively manage”
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What is MiG?
A goal-driven approach to managing grassland resources for long-term sustainability
- Lifestyle
- Economic
- Environmental/Stewardship
- Production
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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

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Does MiG or prescribed grazing provide opportunities for good animal performance while being cost effective as compared to other “methods” of encouraging meat or dairy animals to perform
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Some comparable cost of gain numbers!

- Feedlot—$.75/pound of gain
- Grazed Pasture or Range—$0.42-.45/pound of gain

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Meeting the Nutritional Needs of Livestock from Pasture

Availability
- Proper stocking rates
- Plant recovery and grazing system design

Quality
- Proper management
  - Matching the grazer to the resource
- Time of Use
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Balance Livestock Numbers with Forage Supply

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
  • Stocking rate has an impact on intake and availability

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Carrying Capacity is determined by four factors:
  ▪ Forage production
  ▪ Seasonal utilization rate
  ▪ Daily intake
  ▪ Length of the grazing season
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Annual Forage Production

- Total available forage for the grazing unit
- Plant species/diversity
- Fertility – healthy soil
- Soils/suitability
- Pasture condition/health
- Complementary forage systems
- Weather

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![Pasture calendar]

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Forage production levels
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Seasonal Utilization Rate

- Target based upon paddock numbers
- Length of grazing period
- Water location
- Type of livestock
- Single livestock species vs. multiple species

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![Graph showing utilization rate over length of grazing period]

- Temporal utilization
- Seasonal utilization

Utilization rate (% forage consumed)

Length of grazing period (days)
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Intake

75% Availability  25% Forage

- As a percent of body weight
- Time spent grazing
- Quality
- Biting rate
- Bite size

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Length of the grazing season

- For cow-calf, sheep, goats, horses—think 365 days
- Grass-based dairy—240-270 days
- Short-season stockers offer more flexibility—90-240 days
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What does forage quality look like?
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Manage for Persistence

- Manage leaf area
  - Photosynthesis
  - Root growth
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The Root System is Almost a Mirror Image of the Top Growth
Short, weak plants mean short, weak roots

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GRAZE AND REST PASTURE
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How does soil health relate to grazing?

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The continued capacity of the soil to function as a vital living ecosystem that sustains plants, animals, and humans

- Nutrient cycling
- Water (infiltration & availability)
- Filtering and Buffering
- Physical Stability and Support
- Habitat for Biodiversity
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Simply stated:
- When nutrient cycling, hydrology, and biotic activity are functioning at a level suitable to enhance, improve, or protect soil health therefore minimizing the need for inputs specifically targeted for production.
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Biodiversity Key to Success
- A diverse and fully functioning system provides nutrients, energy and water
- Diversity above ground equals diversity below ground

Grazing Land Health and Management
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