



United States Department of Agriculture

**Natural Resources Conservation Service**

# **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

## Art of Grazing



## Art of Grazing

**Only you can “intensively manage”**

## Art of Grazing



## Art of Grazing

### What is MiG?

A goal-driven approach to managing grassland resources for long-term sustainability

- Lifestyle
- Economic
- Environmental/Stewardship
- Production

## Art of Grazing

### 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

## Art of Grazing

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

## Art of Grazing

### Some comparable cost of gain numbers!

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

## Art of Grazing

### 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

## Art of Grazing

### 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

## Art of Grazing

**Carrying Capacity is determined by four factors:**

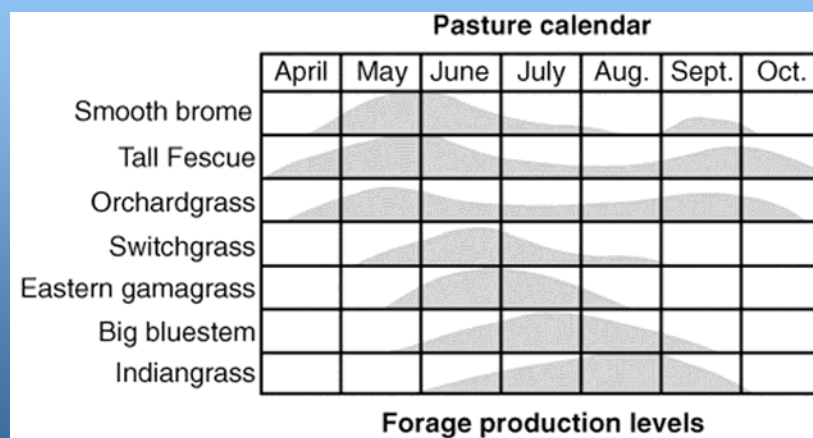
- Forage production
- Seasonal utilization rate
- Daily intake
- Length of the grazing season

## Art of Grazing

### 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

## Art of Grazing

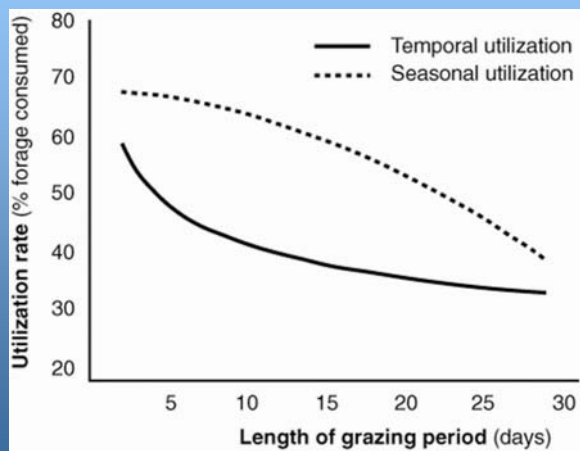


## Art of Grazing

### Seasonal Utilization Rate

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

## Art of Grazing





## Art of Grazing

### Intake

**75% Availability      25% Forage**

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

## Art of Grazing

### **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

## Art of Grazing

What does forage quality look like?

## Art of Grazing



## Art of Grazing



## Art of Grazing

### Manage for Persistence

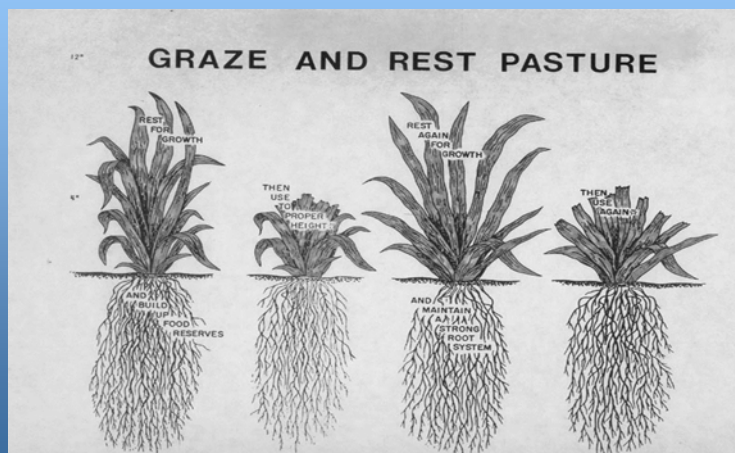
- Manage leaf area
  - Photosynthesis
  - Root growth

## Art of Grazing

**The Root System is Almost a Mirror Image of the Top Growth**  
Short, weak plants mean short, weak roots



## Art of Grazing



## Art of Grazing

How does soil health relate to grazing?

## Art of Grazing

**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

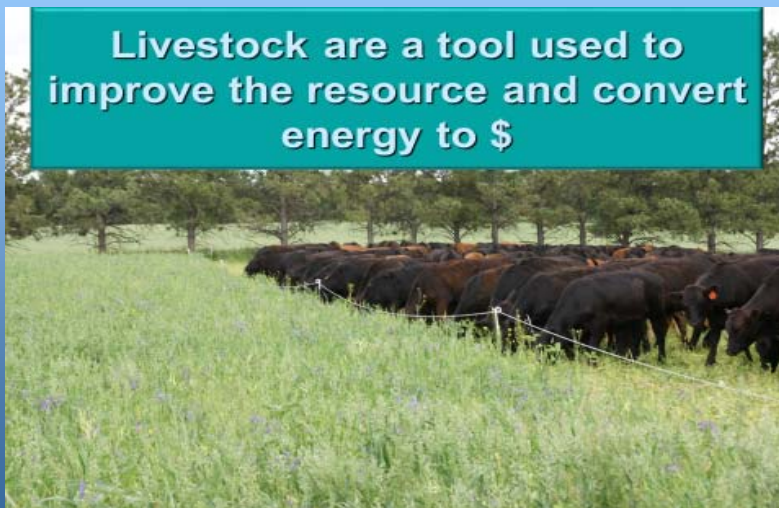
## Art of Grazing

### 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

## Art of Grazing

Livestock are a tool used to improve the resource and convert energy to \$



## Art of Grazing

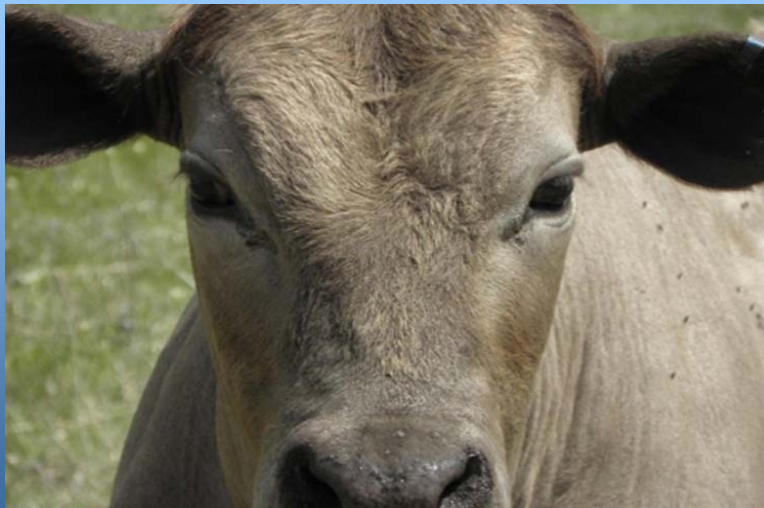


### Biodiversity Key to Success

- 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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