

GRAZING SYSTEMS

Learning Objectives

The learner will:

- Understand the ecology of pastures and key biological attributes of pasture plants.
- Learn to identify important pasture species.
- Become familiar with grazing systems that build or maintain soil fertility and pasture diversity.
- Learn how to calculate and manage forage production.
- Learn strategies for extended season grazing and winter feeding.
- Learn how to manage hay fields as part of the pasture rotation.

Pasture Ecology

- Biotic diversity
- Functional roles of different plant groups
 - Grasses fine, fibrous roots hold and build soil
 - Legumes fix nitrogen
 - Other plants (chicory) have deep taproots to keep soil open deeper down
 - Plant that scavenge and accumulate certain minerals or compounds are important to the health of livestock and wildlife
- Below ground productivity, diversity (more livestock below than above) greater than in annual cropping systems
- Grassland plants and herbivory

Pasture Renovation

- Establishment vs. Improving existing pastures
 - Establishment expensive and takes time: tilling, seeding, weed management, no grazing until plants well established
 - Drilling or broadcasting / harrowing into existing pastures

Forage Production

- Seasonal growth curve
- How to calculate forage production using small plots
- Warm season vs. cool season species
- Pasture mixes: legumes, grasses, and “weeds”
- Stockpiling
- Rotational Grazing Systems

Management Intensive Grazing (MIG)

- Some History: Andre Voisin, Allan Savory, Joel Salatin
- Stubble Height: no less than 3-4”



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- Rest periods: depend on season
- Fencing
- Water
- Minerals
- Labor requirements

Fertility Management

- Root production and die-off plays key role in maintaining fertility
- Nutrient cycling:
 - Livestock return most nutrients to the soil:
 - ✓ 70% of what goes in comes out again
 - ✓ Phosphorous and minerals returned through manure
 - ✓ Nitrogen and potassium returned through urine
- Manure / compost / compost tea applications
 - Timing important
 - Good to know what's in manure or compost
 - Recycle winter feed if possible
 - Tea cost effective way to cover lots of ground
- Mineral may be required
 - Avoid dolomite lime
 - Gypsum good for this area (helps increase Ca:Mg ratio)
 - Other mineral sources

Winter Feed

- Hay production from pastures (spring cutting)
- Hay vs. silage
- Feeding facilities / areas: considerations



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Assessment/Review

- Describe forage plants you would hope to find in a healthy perennial pasture.
- How do you measure forage production?
- Describe nutrient cycling in pastures.
- What is Management Intensive Grazing?



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References:

ATTRA (Appropriate Technology Transfer for Rural Areas) Website:

<http://attra.ncat.org/>.

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