

Grazing Management

- Factors that can be manipulated
 - stocking rates
 - others
- Grazing strategies
- Grazing systems
- Integrating grazing and habitat management

Grazing, overuse, and overgrazing

- **2 misconceptions:**
 - mere presence of livestock does NOT = direct conflict with wildlife species
 - these terms are NOT synonymous
- 1. grazing** = consumption of standing forage by domestic or wild ungulates
- 2. overuse** = grazing that leads to excessive removal of the current years growth (cag)
- 3. overgrazing** = continued overuse that results in regressive changes in plants and soils

Grazing, overuse, and overgrazing

1. overgrazing (not grazing or overuse) results in altered plant communities or sites altered from their ecological potential. ([see graph](#))
2. overgrazing is a relative term
3. moderately overgrazed might contain a slightly altered plant community
4. heavily overgrazed would support an entirely different plant community.

Negative impacts of unmanaged or incorrectly managed grazing

- remove residual cover needed for ground nesting birds
- create undesirable, and maybe irreversible, shifts in succession, loss of habitats in more advanced stages.
- alter habitats so that habitat selection mechanisms are not triggered
- become direct competitors with wild ungulates, causing reduction in wild populations
- reduce floral diversity needed for mammal, bird, and insect communities
- damage shrubs, reducing biomass or mast production, that are important food or cover plants for some wildlife

Grazing Strategies

- Environmental Protective Grazing (EPG)
 - cautious strictly controlled to protect fragile environments and prevent overuse/overgrazing of wildlife habitats
 - conservatively stocked
 - adequate/planned rest/deferment
 - grazing planned around wildlife/plant life cycles
 - closely monitored to prevent overuse
 - managed to leave specific amounts or areas for wlf

Grazing Strategies

- Strategic Grazing
 - use of livestock as a manipulative tool to create specific wildlife habitat conditions
 - livestock can be used to:
 - create weedy patches, leave tall grasses, promote regrowth, reduce unwanted dead material, stimulate lateral shoots, create horizontal diversity, prevent successional change, cause successional change, create bare ground, create bushier shrubs, increase shrub production

Animal Unit concepts

- Animal unit is the amount of forage consumed by 454kg (cow & calf)
- AUM = Animal Unit Month = how much consumed in the specified amount of time
- AUE = Animal Unit Equivalent = is the proportion of animal units of different species based on their relative consumption (see Table 10.2) *concerns*

Factors that can be manipulated

- Stocking rate
- Duration of grazing
- Frequency of grazing
- Rest
- Timing
- Kind of animal

Stocking rates

$$R = \frac{I}{Fv - B}$$

$$F = \frac{I + B}{Rv}$$

$$v = \frac{I + B}{R F}$$

$$I = R(Fv - B)$$

$$B = -1\left(\frac{I}{R} - Fv\right)$$

$$R = \frac{I}{Fv - B}$$

Grazing systems

- Characteristics of grazing systems
 - number of pastures (amount of fencing)
 - number of days in a cycle (rotation)
 - grazing period (duration)
 - rest period
 - number of rests (frequency) per cycle
 - length of cycle
 - rests per calendar year

Grazing systems

- Table 10.5
- Year-long grazing systems
 - continuous yearlong, Merrill - deferred rotation, S. African switchback, HILF, short duration
- Season-long grazing systems
 - rest-rotation systems
 - continuous season-long


