

Targeted Grazing Online Workshops 2015

Made possible the Targeted Grazing Committee of the Society for Range Management.



Why Targeted Grazing?

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Targeted Grazing = The application of a specific kind of livestock at a determined season, duration, and intensity to accomplish defined vegetation or landscape goals.

Today's Ecological Disaster

Leafy Spurge

- Introduced 1829
- 3 million acres
- 60% reduction in cattle grazing
- \$125 million annual economic impact

Russian Knapweed

- Introduced 1898
- 1.5 million acres
- Annual expansion 8% per year
- 50% reduction in cattle grazing

Spotted Knapweed

- Introduced late 1800s
- 2.1 mil. ac., MT alone potential expansion to 33 mil. ac.
- \$42 million annual economic impact.
- Elk use reduced 98%

Yellow Starthistle

- Introduced 1850
- 23 million acres
- 20 million additional acres at risk in CA
- Both livestock and wildlife avoid

59 Invasive Species on Rangeland & Wildlands

WHY TARGETED GRAZING? - Because we will need every available management strategy to address the problem of invasive species!

Livestock Grazing Modifies Plant Communities

- Sheep Reduce Forbs
- Goats Reduce Shrubs
- Elk Browsing Reduces Willows

Four Principles of Grazing Management

- Stocking Rate
- Distribution
- Season of Grazing
- Kind of Livestock

Targeted Grazing vs. Grazing Management

Traditional vs. Targeted Grazing

Traditional Grazing

Goal = Sustainable livestock production

Principles =

1. Stocking rate
2. Distribution
3. Season of Grazing
4. Kind of livestock

Targeted Grazing

Goal = Modification of plant communities

Principles =

1. Kind of livestock
2. Season of Grazing
3. Stocking rate
4. Distribution

The application of a specific kind of livestock at a determined season, duration, and intensity to accomplish defined vegetation or landscape goals.

Grazing Management Principles

- Kind of Livestock
- Season of grazing
- Stocking Rate
- Distribution

Successful Targeted Grazing requires knowledge of:

- Current Conditions
- Desired Future Conditions
- Plant Response to Grazing
- Grazing Animal

Targeted Grazing is a form of Biological Control

Principles of Biological Control

- Deliberate use of natural enemies to suppress a target species.
- Goal is to reduce the population below an ecologically or economically acceptable level.
- Eradication of target plant is never the goal.

Major Difference between Classical Biological Control and Grazing as Biological Control

- Classical Biological Control is self-perpetuating
- Grazing requires perpetual management input

Weeds affect Livestock AND Livestock affect Weeds

Knowledge Required

- Animal Husbandry = Animal at its best
- Plant Ecology = Plant at its worst
- Load the deck in your favor

Temporal Scale Implications

- Long time frame
- Require long-term planning & commitment
- Short-term/High-impact?

Spatial Scale Implications

- Small to large projects
- Large-scale restoration possible

Grazer's Costs of Targeted Grazing

- Cost of animals & potential losses
- Fencing, water, herders, trailers
- Reduced animal production
- You can't "hang them up in the barn"

Land Manager's Costs of Targeted Grazing

- Damage to non-target species
- Spread of weed seed
- May be incompatible with wildlife

Balance Intensity of Management with Situation

Intensive

Sensitive Areas

Urban

Very Targeted

Expensive

Extensive

Weed control is by product

Must produce commodity profitably

Applications of Targeted Grazing

- Broadleaf weeds
- Annual Grasses
- Woody Plants
- Coniferous Forest Management
- Orchards and vineyards
- Fuel reduction
- Wildlife habitat enhancement

Examples:

- Effect of Sheep Grazing on the Density of Leafy Spurge
- Annual Grasses - Cheatgrass, Other Annual Bromes, Medusahead
- Goats for Juniper Control
- Grazing Coniferous Forest
- Orchard and Vineyard Grazing
- Improving Quality of Winter Forage for Elk by Cattle Grazing

Importance of Grazing Principles Depend on Management Objectives

Benefits of Targeted Grazing

- Can be highly effective
- No pesticide residue... 'environmentally friendly'
- Convert weeds into a saleable product
- More sustainable control
- Feasible in rough terrain
- Popularity

Don't forget Integration

- Integration of Grazing and Herbicide
- Integration of Grazing and Flea Beetle

Conclusions

- Grazing as a biological control tool is forever
- Sheep & goats have greatest potential as control agents
- Will still rely on basic principles of grazing management

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