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

http://targetedgrazing.wordpress.com
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

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

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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

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<thead>
<tr>
<th>Intensive</th>
<th>Extensive</th>
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<tbody>
<tr>
<td>Sensitive Areas</td>
<td>Weed control is by product</td>
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<tr>
<td>Urban</td>
<td>Must produce commodity profitably</td>
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<tr>
<td>Very Targeted</td>
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<td>Expensive</td>
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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
References:


