

# NATURAL RESOURCES TARGETED GRAZING: A PRIMER FOR CONSUMERS

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## INTRODUCTION

*Targeted grazing using sheep, goats, or cattle is being used increasingly to manage vegetation in a variety of settings. This primer is designed to help landowners, homeowners, nonprofit staff, and government agencies to understand the basics of targeted grazing.*

### WHAT IS TARGETED GRAZING?

According to the *Targeted Grazing Handbook*, “targeted grazing is the application of a specific kind of livestock at a determined season, duration and intensity to accomplish defined vegetation or landscape goals.... The major difference between good grazing management and targeted grazing is that targeted grazing refocuses outputs of grazing from livestock production to vegetation and landscape enhancement.” (Launchbaugh and Walker 2006).

Targeted grazing contractors typically provide the livestock, fencing, herders, livestock watering equipment, predator protection, and other infrastructure necessary. By managing the type and number of animals, the duration of grazing, the season and frequency of grazing, and the spatial distribution of livestock, targeted grazing can help landowners and managers achieve a variety of land management goals.

### WHERE IS TARGETED GRAZING EFFECTIVE?

Well-managed targeted grazing can be used to address site-specific landscape goals. Targeted grazing can impact specific invasive weeds (like yellow starthistle, medusahead or Himalayan blackberries). By controlling competing vegetation at specific times, targeted grazing can enhance habitat restoration efforts. Targeted grazing can reduce fine fuels and ladder fuels to reduce wildfire danger in some environments.

Typically, targeted grazing is a cost-effective vegetation management alternative where other options are ineffective. Specifically, targeted grazing can be more cost effective on landscapes that are too steep, rocky or remote for conventional vegetation management (like mowing or chemical treatment), or in the urban-wildland interface where burning is not an option.

### MANAGING ANIMAL IMPACTS

Grazing livestock have three basic impacts on the landscape. They consume vegetation through grazing, they trample vegetation (which can facilitate the breakdown of plant carbon in the soil), and they transfer nutrients through defecation and urination. Targeted grazing uses all three impacts to accomplish specific vegetation management goals.

Targeted grazing contractors also have a solid understanding of the growth characteristics and vulnerabilities of specific target vegetation. For example, grazing yellow starthistle with sheep or goats during the bolt stage (April to June, usually), can dramatically reduce seed production. Browsing Himalayan blackberries in the fall as the plants are going dormant can stress root systems at a critical period.

Timing of targeted grazing for fuel reduction is also a critical consideration. To reduce the potential for regrowth, fuel reduction grazing should be done after the last spring rain. Since the nutritional quality of annual grasslands typically declines rapidly at this time of year, targeted grazers may need to provide supplemental nutrition to ensure appropriate impact to targeted vegetation. In some instances, cattle may be the most appropriate species for particular projects.

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**WHY SHOULD I PAY SOMEONE TO GRAZE? ISN'T FREE GRASS ENOUGH?!**

Targeted grazing is a different business model than simply grazing for livestock production. Targeted grazing, as outline above, focuses on impact target vegetation at exactly the right time for specific goals. Grazing for livestock production, on the other hand, focuses on providing optimal nutrition to increase production (like number of lambs or pounds of gain, for example). The following table summarizes the differences between targeted grazing and more traditional livestock production businesses:

**Table 1**

	<b>Targeted Grazing</b>	<b>Sheep or Goat Production</b>
Flock characteristics and species	<ul style="list-style-type: none"> <li>• May be mixed species (sheep/goats)</li> <li>• Mixed age classes</li> <li>• May include older wethers (castrated males) to impact brush and coarser vegetation (because these animals are not used for reproduction, their maintenance nutrition requirements are often lower than reproducing females)</li> </ul>	<ul style="list-style-type: none"> <li>• Sheep or goats</li> <li>• Breeding flock + replacement females often grazed separately</li> <li>• Wethers are marketed to generate income</li> </ul>
Primary income streams	<ul style="list-style-type: none"> <li>• Grazing contracts</li> </ul>	<ul style="list-style-type: none"> <li>• Sale of lambs or kids</li> <li>• Sale of wool</li> </ul>
Secondary income streams	<ul style="list-style-type: none"> <li>• Sale of lambs/kids</li> <li>• Sale of wool</li> </ul>	<ul style="list-style-type: none"> <li>• Seasonal targeted grazing (usually while ewes/does are not lactating or pregnant)</li> </ul>
Management emphasis	<ul style="list-style-type: none"> <li>• Make animals available for grazing contracts</li> <li>• Maximizing days on paid contracts</li> <li>• High stock density to impact vegetation</li> <li>• May accept drop in body condition to facilitate desirable impacts to low quality vegetation</li> </ul>	<ul style="list-style-type: none"> <li>• Reproduction and lbs of lamb/kids marketed</li> <li>• Wool quality and lbs of wool marketed</li> <li>• May use high stock density to improve forage quality and production</li> <li>• Focus on body condition at specific production stages (pre-breeding, breeding and pre-lambing)</li> <li>• Requires irrigated pasture or other summer green forage (mid-April through mid-October)</li> </ul>
Reproduction	<ul style="list-style-type: none"> <li>• Timed to allow maximum days on grazing contracts</li> <li>• Lower conception and weaning rates may be accepted in exchange for increased grazing income</li> </ul>	<ul style="list-style-type: none"> <li>• Timed to match peak demand (late gestation and lactation) with peak forage quality/quantity</li> </ul>

**MATCHING PRODUCTION WITH FORAGE: LIVESTOCK PRODUCTION VS. TARGETED GRAZING**

*Table 2: A comparison of livestock production operations with targeted grazing operations demonstrates that targeted grazers maximize potential time for grazing activities by modifying their production schedule.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Livestock Production</b>	Late gestation	Late gestation / birthing	Lactation	Lactation	Lactation	Lactation	Dry	Dry	Flushing	Breeding	Early gestation	Early/mid gestation
<b>Forage Type</b>	Annual	Annual	Annual	Irrigated	Irrigated	Irrigated	Annual	Annual	Irrigated	Irrigated	Annual or Irrigated	Annual
							<b>Targeted Grazing</b>					
<b>Targeted Grazing</b>	Lactation	Lactation	Dry	Dry	Dry	Breeding	Early gestation	Early/mid gestation	Late gestation	Late gestation / birthing	Lactation	Lactation
<b>Forage Type</b>	Annual	Annual	Annual	Annual	Annual	Annual	Annual	Annual	Annual	Annual, Irrigated or alfalfa stubble	Annual, Irrigated or alfalfa stubble	Annual, Irrigated or alfalfa stubble
	<b>Potential Targeted Grazing Period</b>											

**LANDOWNER GOALS AND EXPECTATIONS**

Realistic landowner goals are important for successful targeted grazing applications. Targeted grazing is often a long-term approach that addresses prior problems. For example, invasive weeds may be symptomatic of a long-term lack of management. A single targeted grazing project is unlikely to address these long-term symptoms; a multi-year approach will likely be necessary to improve ecological function and reduce the weed seedbank. Many targeted grazing contractors will reduce their annual per acre charges in exchange for multi-year contracts.

Expectations are also important. Landowners who expect a uniform appearance to land treated with grazing (as if the land had been mowed) will likely be disappointed; grazing often leaves a patchy appearance on the landscape. Furthermore, grazing does not often provide the immediate visual effects of chemical treatment. Vegetation treated with herbicide, for example, shows immediate impact; grazing is a long-term management technique.

**GRAZING CONTRACTOR RISKS**

Targeted grazing contractors assume a variety of risks. Variability in forage production (wet years typically produce a much greater volume of grass, for example) can make scheduling multiple contracts difficult. Toxic plants, whether naturalized, landscaped, or fed unintentionally by neighbors, pose risks to livestock health. Vandalism or theft of grazing equipment – and even livestock, in some cases – create financial and legal risks for contractors.

**WHAT TO LOOK FOR IN A TARGETED GRAZING CONTRACTOR**

Targeted grazing companies are essentially service providers. Consequently, experience, responsiveness and attention to detail are critical. Consumers should look for companies with experience in grazing projects in similar environments and situations. Ask potential contractors about their experience level – and ask for references.

**HOW MUCH DOES TARGETED GRAZING COST?**

Targeted grazing may not be the least costly vegetation management option (compared especially to mowing or herbicide treatment). As outlined above, targeted grazing is often the best alternative where other treatments aren't possible or are less desirable.

Most targeted grazing contractors will provide an estimate on a per acre basis, allowing consumers to compare targeted grazing to other vegetation management options. In addition, contractors will provide an estimate of the project start date and duration. These estimates can be somewhat uncertain depending on year-to-year changes in vegetation quantity.

There are a variety of factors that impact the cost of a particular targeted grazing project, including:

- Relative ease (or difficulty) of setting up infrastructure, including loading and unloading facilities. Projects in steep or difficult-to-access terrain require more labor (and, therefore, are typically more costly).
- Access to livestock water. Easily accessible water can make the project less costly; projects without access to water may require the contractor to haul water to the livestock.
- Other risks, like vandalism, toxic plants, or proximity to high-value landscaping may increase the cost.
- Multi-year contracts are typically cheaper on a per acre basis. Livestock and targeted grazing staff become more accustomed to a particular property (and therefore more efficient) if the contract is for multiple years.
- Headache factors – like free-roaming pet dogs or neighbors who object to livestock or livestock guardian dogs – can increase the cost of a project.

### **SCHEDULING**

Landowners and managers should contact targeted grazing contractors well in advance of the desired project start date. Targeted grazing contractors are busiest during the spring and early summer months; scheduling these jobs typically occurs in the late fall and winter.

### **FURTHER READING**

- Targeted Grazing Handbook (Launchbaugh and Walker 2006) - <http://www.webpages.uidaho.edu/rx-grazing/Handbook.htm>
- The Art and Science of Targeted Grazing – A Producer’s Perspective (Macon 2014) - <https://journals.uair.arizona.edu/index.php/rangelands/article/view/19702/19324>

