CHAPTER 17:
Contracting for Grazing and Browsing to Achieve Resource Management Objectives: *A Primer for Land Managers*

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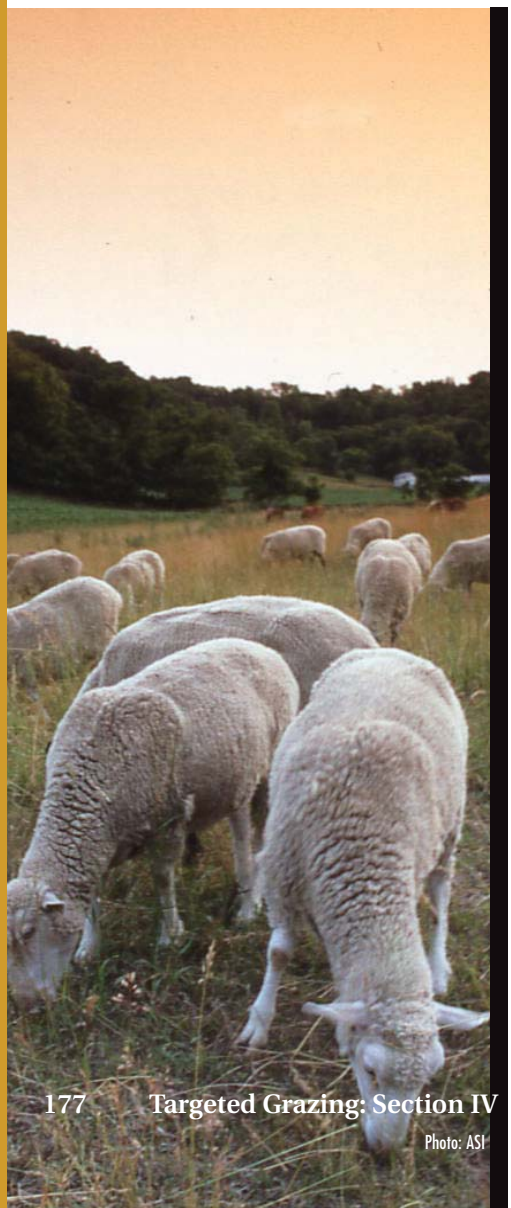
10 KEY POINTS

- Grazing for hire can be a powerful tool for changing and maintaining vegetative composition.
- Land managers should take the time to select the right service provider for the job.
- Targeted grazing is as much an art as it is a science.
- Land and livestock managers need a long-term commitment to alter landscapes.
- A land manager's most important step is clearly establishing long-term goals.
- Open communications can foster harmonious relationships between service providers and land managers.
- Potential service providers need to conduct on-site tours and evaluations.
- Key elements for success are water, livestock placement, transportation, and equipment.
- Service providers must know the applicable regulations and obtain the needed permits.
- The land manager is responsible for determining whether targeted grazing is the right tool for a particular situation.



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INTRODUCTION

Contracting for targeted grazing services is a viable option for land managers with significant vegetation management challenges. This primer is designed to help land managers evaluate whether targeted grazing services will work in their situations and, if so, how they can choose a qualified service provider. Thinking through the following ideas and gathering the suggested materials will help in picking the right grazing service providers for the job. Some of the following suggestions may seem obvious, others counterintuitive. But they should illuminate what targeted grazing services can and cannot do and whether a service provider has enough experience to do the job right.

This primer focuses on points to consider in contracting with a service provider for targeted grazing. It should help address basic questions about whether a grazing prescription is appropriate for a particular problem. It does not provide enough information to teach someone how to operate a contract grazing business or to manage prescribed grazing on a day-to-day basis. That requires greater knowledge than is found here.

Accomplishing Landscape Goals with Targeted Grazing Services

Over the past several decades, controlled, directed grazing and browsing by sheep and goats has evolved into a business. No matter what it's called – targeted grazing, contract grazing, prescribed grazing, managed herbivory, ecological grazing services, or paid-to-graze – this type of grazing for hire is a powerful tool for changing and maintaining the vegetative composition and structure of a wide variety of landscapes. Grazing has been used effectively to reduce fire fuel loads, eliminate invasive and exotic plants, restore water tables, and clear and maintain land in open vistas. Potential applications are virtually endless, limited only by the imagination of land managers, landowners, and service providers.

Targeted grazing services apply grazing animals, under a fee-based contract, to control vegetation and achieve a specific desired plant community. Although grazing is often viewed as a way to remove undesirable plants, it is really a method for creating and maintaining the complex habitat conditions for a desired plant community.

Using the vegetative grazing preferences of animals like sheep, goats, and cattle, one can suppress or eliminate certain undesirable plants from a landscape and encourage other more desirable species. If a landowner's management needs coincide with an animal's grazing preferences, targeted grazing can be a powerful and cost-effective tool for reaching those land management goals.

For targeted grazing services to work effectively, however, the land manager must have a clear long-term vegetative goal. What should the land look like when it has been restored? This is the most important question that a land manager must answer for targeted grazing to be effective. Once the desired outcome is clearly known and described, a skilled service provider can employ the correct animal species and advise the best options to reach these landscape goals.

Effective targeted grazing is as much an art as a science, and the level of experience of both the contract grazer and the animals will be critical to long-term success. A good service provider will properly evaluate whether grazing will or will not work in a particular situation and whether complementary techniques are needed.

Site restoration using grazing entails two phases. The first is to suppress undesirable plants and restore a desired plant community. The second is to maintain that desirable community indefinitely. These two phases use different grazing approaches, take different lengths of time, have different costs per acre, and, in some cases, may even use different species or breeds of livestock.

Economic Costs and Values of Targeted Grazing Services

Land mangers interested in targeted grazing services must have an appreciation of the challenges that contract grazers face if they expect to develop an effective relationship with the service provider. The concept of targeted grazing is easy to grasp, but its implementation is logistically complicated and capital intensive. As opposed to other techniques like mowing or applying herbicides, targeted grazing requires daily care of livestock throughout their lives. Although a few operators have been able to survive a nomadic existence, moving from one job to another over a large geographic area, the future of contract grazing services will likely involve large, long-term contracts on contiguous or proximate land holdings of many hundreds of acres. In these situations grazing service providers can make long-term investments in equipment and animals, provide steady employment for qualified herders, and respond effectively to varying seasonal and annual growth patterns of the target plants. Under these circumstances, a provider can establish a "home farm" where animals can retreat in case of crisis and during winter awaiting the next grazing season.

With long-term contracts on large acreages providers can train workers and provide them with jobs. Such operations can invest in quality control and long-term results, which are essential for assuring that grazing is a reliable tool for land managers.

A challenge for the contract grazing industry is that too few land manager clients are willing to make long-term commitments on significantly large acreages. However, once land managers become familiar with the progress that can be made using livestock to control invasive plants, restore lands to native or desirable plant communities, reduce fire fuel loads, or any number of other applications, and they understand how best to choose a qualified service provider, the targeted grazing service community should grow and prosper.

The cost effectiveness of a targeted grazing service is determined by the value of the change in the vegetative community, for example, reducing fuel loads, saving water, restoring native plant communities, increasing forage yields of pasture, or opening up impenetrable brush for public recreation. The size of an area and the length of a contract make big differences in the service provider's cost per acre. Targeted grazing is capital intensive. A service provider needs enough financial security over a long enough period to recoup the initial investment and make a profit. Land managers unwilling to offer such long-term contracts may have difficulty finding a reliable and skilled service provider. If too few acres are available to sustain a contract, pooling acres with other interested landowners in the immediate vicinity can generate a cost-effective contract. For this collaborative approach to work, the treatment areas must be close enough together to minimize transportation costs.

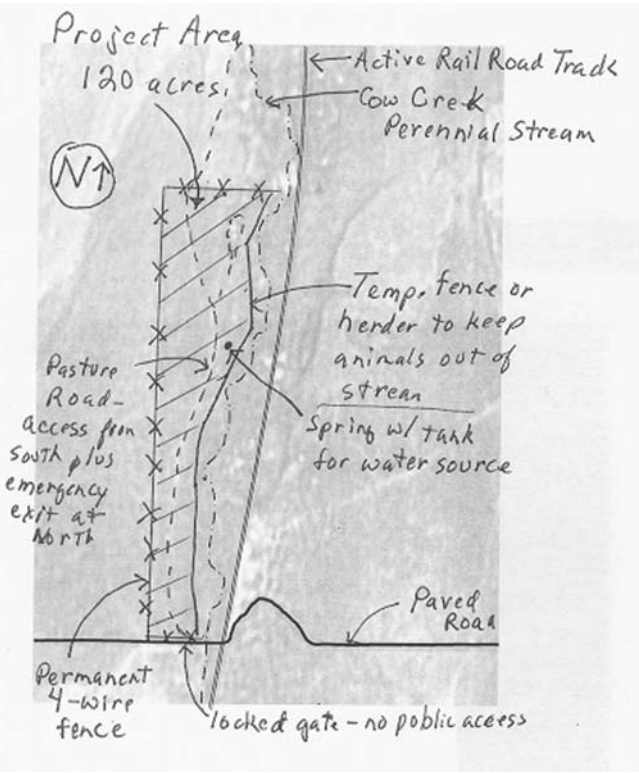
In most situations the current state of undesirable vegetation has taken many years to develop, and grazing prescriptions that address such problems will probably take several years to achieve meaningful results. While carefully targeted grazing can be highly effective for restoring vegetative landscapes, it is not a quick fix.

Creating a Targeted Grazing Service Plan and Contract

The most important step for a land manager is to clearly establish long-term goals. Without a description of what the land manager wants the land to look like – its desirable condition – the land manger cannot expect a grazing service provider to achieve the desired goals. The land manager and grazing service provider must develop a plan and agree on the terms of a contract, including when and where to graze. Trying to eliminate an invasive plant also requires determining what plant community should replace it. Knowing the desired appearance of the landscape is essential to a successful plan and contract, and it allows the land manager and grazing service provider to agree on measurable results. The strategies and tactics for achieving the desired vegetation or landscape outcome are largely the job of the service provider.

Working toward a shared vision of the goals, processes, and intended outcomes can foster a harmonious relationship between the service provider and the land manager. Many potential problems and disagreements can be avoided if the two parties discuss their respective visions at the outset. Writing down key discussion points can keep everyone on the same page and essentially creates the plan and contract. Developing a plan and contract may not be exciting, but it beats the heartburn and problems that can arise without them. Disagreements may still arise, but the process of developing a plan and contract should decrease potential problems. More importantly, communication during the process will help the parties more easily address issues.

Goals and outcomes should be described as measurable results, which will provide both parties with a clear understanding of how success will be determined.



Map Figure 1

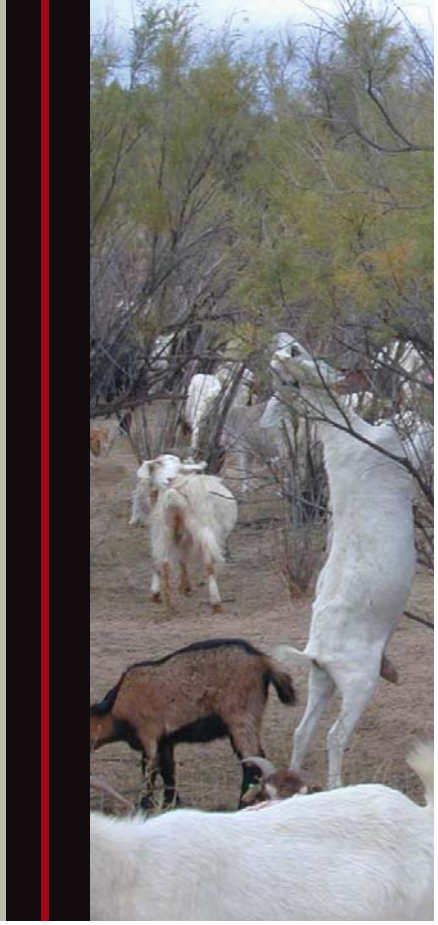


Photo: Karen Launchbaugh, University of Idaho

Measurable results may take many different forms, but the best are based on easily determined quantitative or qualitative characteristics the land should possess when the contract is satisfied. Before and after photographs from fixed positions are often the most practical form of monitoring. Land managers may want to request pictures of previous contracts on similar vegetation types so they know what to expect. Remember the adage, "A picture is worth a thousand words." More quantitative monitoring techniques can be used such as canopy cover, percent composition, biomass, stubble height, fire condition class, fuel load, and average number of plants remaining of the targeted species, but they can significantly increase the cost of the contract.

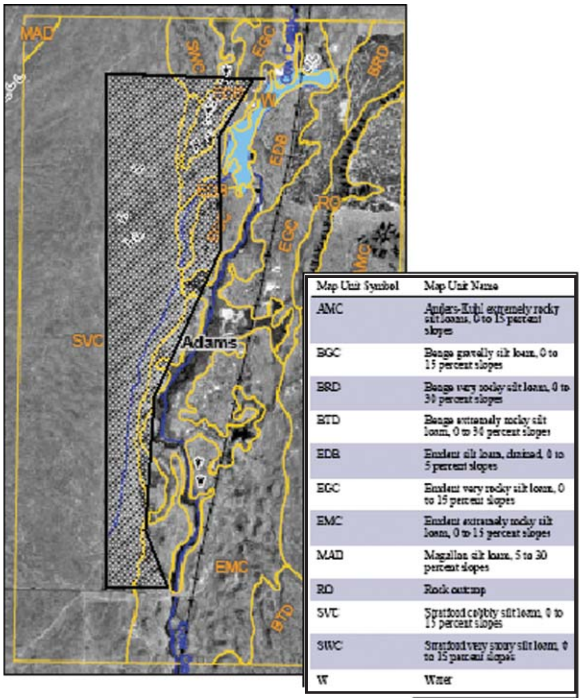
If neither party has experience with specific problems or circumstances, it may be difficult to establish measurable outcomes at the beginning. An experienced service provider will explain what he or she knows or doesn't know about a specific problem. An experiment of a few weeks or months can help determine what is possible or practical. In such cases, a land manager needs to accommodate the service provider's management needs and remain flexible with goals until a realistic outcome can be established.

Site Description and Analysis

Potential grazing service providers will need an on-site tour and evaluation. No reputable provider will take a job without seeing the site. The questions they ask will reveal a lot about them. The land manager should describe the treatment site and provide maps as described below so the service provider clearly understands the boundaries and other important characteristics. Lack of such information can hamper the provider's ability to accomplish the objectives, cause bad relations, and even create liability. The land manager and service provider should inspect the site before the project starts to view issues of significance. A good map can show many of the site characteristics that should be described or analyzed. Here are several characteristics to consider:

Boundaries. A base map of the project area should show the perimeter of the area to be treated and any exclusion areas that should remain untreated. Fences or landmarks that delineate the property and treatment site should be noted (Map Figure 1).

Topography. The base map should provide basic information about topography, which can influence the behavior of grazing animals and must be considered when planning the treatment.



Map Figure 2: Soils Map of Project Area (http://websoilsurvey.nrcs.usda.gov)

Vegetation. The overall vegetative composition of the property should be described and areas with target plants delineated. It's important to list all of the known plant species on a site. A good grazing service provider will review this list and point out plants that may pose problems, like poisonous or threatened or endangered species.

Soils and Ecological Sites. Soils influence plant types. Knowing the soil properties on the site will help determine the existing vegetation and what plant communities are possible. Information on soils, combined with topography and climate, can help predict treatment-induced erosion problems. Soils are also the basis for ecological sites, formerly called range sites. Ecological sites delineated on the base map can provide much of the information about vegetation and potential plant communities (Map Figure 2). Soils maps delineating soils and describing ecological sites are available at the local office of the Natural Resources Conservation Service (look in the phone book under United States Government, Department of Agriculture) or on the Internet at the Web Soil Survey http://websoilsurvey.nrcs.usda.gov or Ecological Site Information System http://esis.sc.egov.usda.gov/.

History of the Site. A good history of land uses of the project site is helpful. Have animals grazed on the site before? If so, what kind, how long ago, and to what purpose? Several animal diseases can survive in the soil of grazed land for many years. Past problems with animals may also indicate the presence of poisonous plants. Knowing past land uses, including soil contamination, agricultural uses, municipal dumps, and old settlements, can help the grazing service provider keep animals healthy and avoid problems or losses.

Neighbors and Other Users. Nearby landowners should be informed that animals will be used on the property and why they're there. This can eliminate surprise and help avoid conflicts. The service provider should also be informed about ATV and hiking trails that cross the property and whether hunting is active on the site. The land manager should discuss how herders and others should respond to visitors and the kinds of signs or notifications that are appropriate. Keeping a service provider informed about these issues will go a long way toward avoiding problems.

Water. The site map should indicate water sources both on and near the property – streams, ponds, wells, and rivers – with a brief description of the water quality for each. The distance to off-site water and whether it is potable should also be noted. A good service provider will have water-hauling capability – tank trucks or trailers and water pumping and storage capacity – whether drawing water from on or off the site. Also, any wetland or water course issues related to animals drinking directly from them should be clearly indicated. Catchment areas, watersheds, and historical flood zones should be identified. If flash flooding is a problem in the area, the service provider needs to know this to plan escape routes.

Fire. What is the area's fire history? How long since the last fire and what is known about fire behavior and the prevailing winds? Such information helps the provider plan escape routes and retreat areas.

Animal Welfare

The grazing service provider's first priority is always the animals' welfare. While the service provider is managing the animals to reach the desired vegetative outcome, results cannot be achieved if the animals are placed in danger. Situations may arise that force the provider to remove the animals for their protection. These may include fire, flooding, poisonous plants, or the lack of adequate forage. A good provider will anticipate many of these contingencies, but no one can anticipate all of them, especially concerning weather and fire. When such problems arise, both parties need to be prepared to determine whether animals can return and finish the job or whether the site has become unsuitable for targeted grazing or browsing.

Principle Requirements for a Project to Succeed

Water

Clean, plentiful water must be available on site or near enough to be hauled or for the animals to be trailed to it. If there is no on-site water, the land manager should help the service provider find a source for filling 500- to 1,000-gallon tanks easily and quickly.

Livestock Placement

How the animals are managed will depend largely on the target plant species and landscape goals. In some cases herding will be most effective. In others, temporary fencing will be needed. Palatability of the target plant, time of year, weather, and site conditions will also determine management. Some sites may be too rugged to fence, others so urban that fencing is the only solution. Requirements and particular preferences should be clearly stated.

Transportation

Moving animals to and from the site is critical. At least two avenues of access are needed. Can a large truck, semi, or gooseneck access the site easily? In the event of flood or fire is there a second means of egress? Does the vegetation plan require the service provider to move animals on and off the site repeatedly or can they be grazed continuously on the site for a month or more? Transportation can greatly increase a project's cost so it may be helpful to design a plan so that when the first pass is completed it is time to start the second pass. This may require several hundred acres or more depending on rainfall and vegetation. With 100 inches of rain a year, kudzu grows back faster than does leafy spurge with 15 inches of rain a year.

Equipment

Equipment requirements will vary depending on terrain, number of animals, and weather conditions. Most grazing service providers will have adequate trucking for animals and water, good fencing and the means to move it around, pickup trucks, ATVs, maybe a tractor, tank trucks, water troughs, and portable handling equipment. Equipment needs also will vary by site, contract requirements, and vegetation goals. This is a capital-intensive business. Land managers should be skeptical of anyone who plans to show up with a couple of cattle panels and a pickup truck.

Theft

If theft is known to be a problem in the area to be grazed, the service provider needs to know so he or she can plan to prevent the loss of equipment and animals. Service providers cannot afford to lose expensive equipment like fence chargers, fences, or pumps. Such information can also protect herders from personal risk. Before the contract work begins, it should be agreed who is responsible for losses and who will pay for lost animals and stolen equipment. This also applies to losses from fire, flood, or other natural causes.

Crisis Management

As with any land management activity, things can go wrong. Crises will occur less frequently with an experienced service provider, and the degree of loss can be much less with appropriate planning and preparation. Again the conditions of the site make a big difference. Animals that escape from a pen in a rural area and start grazing tomorrow's acreage do little harm, unlike animals in an urban setting that get onto a highway or devour someone's garden. Emergency contacts should

Photo: ASI

be posted at the project site and all participants should maintain a current contact list of local authorities and emergency services. In the event of a crisis, the service provider needs to get on site as quickly as possible. Cell phone numbers of the herder and everyone up the service provider's chain of command should be available to the land manager and to local police and animal control officers so that if they are the first to be contacted they can reach people who can solve the problem. It's a bad idea to have a local police officer trying to herd animals in the middle of the night. Notifying key players before the project begins can minimize surprise and confusion and speed response times.

Fire

Fire poses a special management problem. An area that has been heavily grazed is less likely to burn, but the service provider will always want to remove animals in danger. That is why it is important to know previous fire behavior and to have two means of egress established. In case of fire, evacuate personnel first, then animals, then equipment. When in doubt – get out.

Extreme Weather

Lightning, freak snowstorms, hurricanes, hail, and floods are serious problems. A grazing service provider will need a safe, fenced retreat area where animals pulled from a project can go on short notice. Land managers may have better access to weather information and should inform the service provider when bad weather is forecast.

Regulations and Permits

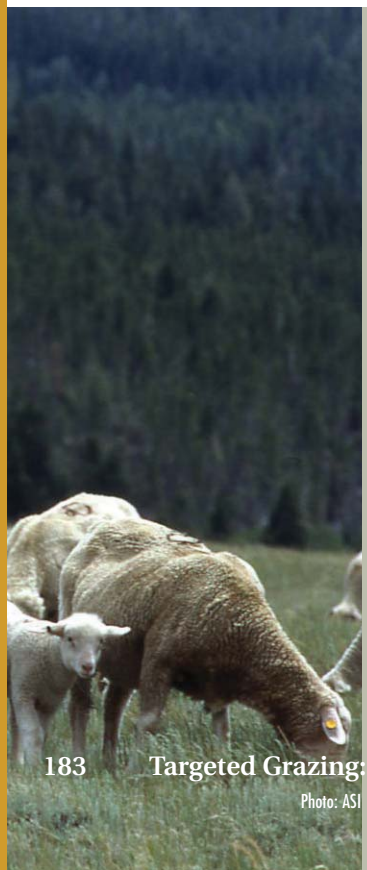
A wide variety of local, state, and federal regulations may or may not relate to targeted grazing services. Be sure to review the following:

Wetlands Regulations and EPA, NEPA, and agency requirements. Working with the U.S. Forest Service, Bureau of Land Management, Park Service, or other federal land management agency requires compliance with federal regulations and agency-specific policies. State or county regulations may also apply.

Zoning Restrictions. In suburban or urban areas, a variety of regulations relating to the presence of livestock within city limits may apply. The regulations can be complied with or may be waived. But knowing them in advance allows for obtaining the necessary permits before the animals arrive.

Endangered Species. Endangered plants or animals, or their habitat, in the area targeted for vegetation management may impose seasonal bans, stipulate areas of non-use, or restrict specific activities. Federal and state fish and wildlife agencies can explain area requirements.

Livestock Health and Identity. Grazing service providers should maintain and provide health records for important communicable diseases. Animals that are hauled across state boundaries must also be accompanied by brand or identity records and meet state health requirements.



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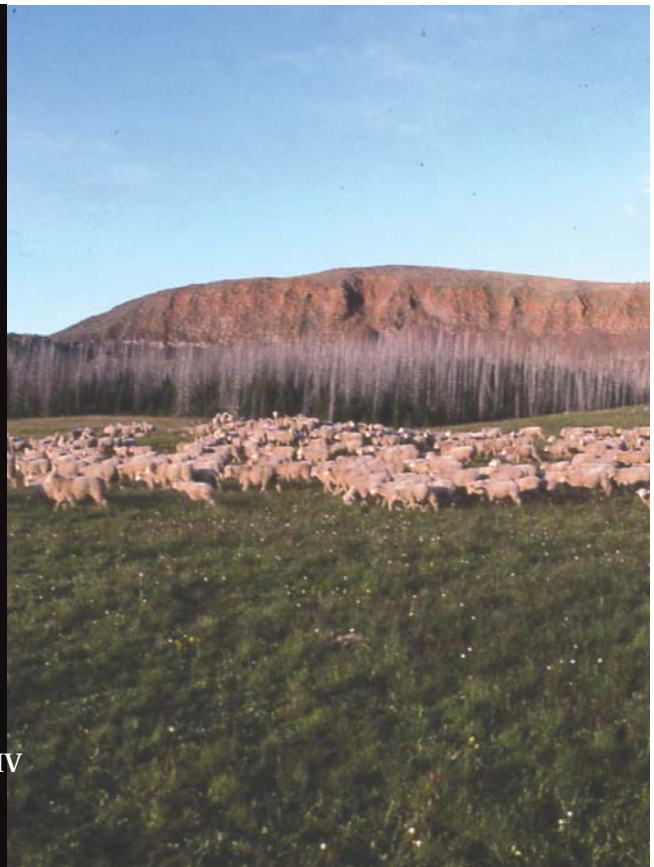

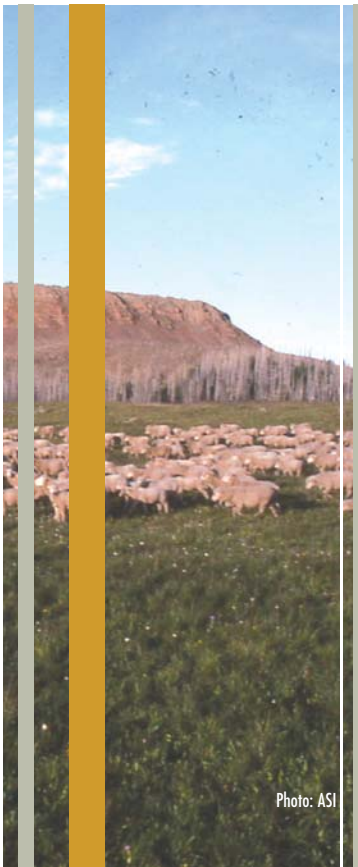

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Contract Details

At a minimum, a good contract will contain the following:

- **Where.** A detailed map that identifies the perimeter of the contract area and any areas within the overall area that should remain ungrazed. The land manager should clearly flag these exclusion areas before the contract begins and, if possible, before site visits with potential service providers.
- **Time Frame.** The service provider will determine the timing for achieving vegetation management goals only after a site visit. Contract duration will depend on weather, climate, condition of target plants, time of year, and desired outcomes. If multiple grazing passes are required, notification procedures should be worked out before the service provider returns for successive passes.
- **Up-Front Charges.** Nonrefundable setup and delivery fees are often specified in the grazing contract. For large contracts, a service provider may want one-third of the total annual contract up front to help defray project capital costs.
- **Payment Schedule.** Payment schedules are essential and should include set dates and explicit details of work completed. The land manager should inform the service provider about turnaround time on invoices – 10 days, 30 days, etc. Cash flow is critical to all operators. Late penalties are standard. Prompt payments keep grazing service providers happy and working hard to meet landscape goals. Slow or missed payments will aggravate the relationship.
- **Indemnity Clause or Bonding.** These requirements vary by state. If indemnity clauses or bonds are employed, the work to be accomplished should be clearly defined in the contract. This may include height, percentage of target plant remaining, level of suppression, or other specific vegetation condition. Such conditions or measures may not be possible to ascertain until after a season has shown how the target plants are responding.
- **Insurance.** All service providers should carry liability insurance and list the land manager as an additional insured. Amounts will vary by service provider (some carry as much as $2-3 million) but liability insurance should be a mandatory component of any contract. Service providers must also carry workers compensation insurance on all employees. A performance bond can be used but is not required by law.
- **Natural Disasters.** Disasters happen and can radically change the conditions of a contract overnight. These events can be covered in a contract with a 'Force Majeur' clause. However, goals can still be achieved after the dust has settled, even if it's a year later, as long as parties are reasonable and work together.

Other Issues

Lead Time

Putting together large flocks, finding qualified herders, and assembling the necessary equipment takes time, especially with large contracts. The service provider will not begin this process until a signed contract is in hand. A lead time of two to three month is normal. For large projects, six months to a year is reasonable.

Duration

The parties should discuss and agree to the duration of a particular outcome. Vegetation often looks impressive right after the animals leave. In most cases it will grow back, so there should be an agreement as to how long the "new" condition will persist – 90 days, six months, a year, etc. Spelling that out protects the service provider and prevents disappointment for the client.

Media Management

In many cases, contract grazing will arouse a great deal of media interest. How to handle media queries should be worked out in advance. Is media attention an important aspect of the job? Who should field inquiries? How exposed to public scrutiny will the project be? Can herders handle the public's questions? The service provider's principal task is to accomplish the grazing prescription. Public information demands should not be allowed to hinder job performance. If considerable public interest is anticipated, the expected tasks and who will bear any expense associated with them should be written into the contract.

TAKE HOME MESSAGE

Land managers interested in incorporating targeted grazing as one of their land restoration tools should use these guidelines to determine if their situation is amenable to the use of grazing or browsing to help achieve a desired outcome and to evaluate the qualifications of potential grazing service providers. Make sure the knowledge or experience portfolio of the provider meets the needs for land enhancement. Poor results, including an undesirable plant community and increased soil erosion, can occur if these criteria are not met. The service provider should offer information about previous work experience on various types of sites and target species. Land managers should obtain and check references for previous jobs. If potential grazing service providers have little experience, land managers can assess their performance potential by probing their knowledge of land, plants, and animals and assessing their proposals against the information provided in this handbook. Ultimately, it is the land manager's responsibility to determine if targeted grazing is an appropriate tool for a particular situation and if potential grazing service providers are qualified to conduct the project.

Photo: ASI