

Livestock Grazing Management – An Important Part of Noxious Weed Management

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Healthy rangelands can fight against noxious weeds. Identifying your rangeland plants (grasses, forbs, and shrubs) is the first step in evaluating your ranch's general rangeland health. Also, understanding how they respond to grazing pressure and how to keep them healthy will help you develop an overall plan to fight against noxious weed invasion, competition, and establishment.

Your rangeland needs to remain healthy and producing the greatest amount of forage for long-term livestock production. This occurs when rangeland contains plant species such as western wheatgrass, sideoats grama, big bluestem, and threadleaf sedge. What plants exist largely relates to your livestock grazing management system.

All plants respond differently to livestock grazing pressure. The grasses that livestock prefer are called “decreasers” because they decrease over time with grazing pressure. If these grasses are grazed over and over and are not allowed to regrow, produce seed, and store root reserves, then they eventually die out. They are replaced with “increasers” – plants such as red threeawn, broom snakeweed, bottle brush squirreltail, and cactus. These plants, which are undesirable to livestock and most wildlife species, will increase with grazing pressure. Noxious weeds fit in the “invader” category. Invaders are plants that invade areas of rangeland where the native vegetation has been disturbed or is no longer productive, overgrazed, or in a weakened state such as being heavily grazed during a long-term drought. Invaders can increase rapidly in deteriorated rangelands.

To remain healthy, rangeland grasses must be allowed to retain enough leaf material to carry on photosynthesis. This is required for them to grow, build root reserves, and reproduce. If desirable grasses are grazed by livestock repeatedly and continuously throughout the growing season, the grass plants will try to replace grazed leaves through regrowth, which uses stored root reserves. If sufficient root reserves are gone once fall and winter come, the plant will die. The desirable plant will be replaced by “increasers” or “invaders”. Once these become established, it is very costly or impossible to get rid of them and restore the once-productive rangelands.

Livestock rotation grazing management practices help keep native rangeland grasses healthy by removing cattle from a given pasture during a part of the growing season. Many types of grazing rotation systems exist, including short-duration grazing, deferred rotation grazing, and rest rotation grazing. Many ranchers have been practicing these types of grazing systems for years, adjusting and modifying the system to fit their specific livestock numbers (stocking rate), rangeland productivity, terrain, and vegetation types.

Short-Duration Grazing

Short-duration grazing emphasizes improvement of range condition by using high grazing

pressure to increase uniformity of forage use with sufficient non-grazing time for plants to regrow following grazing.

Short-duration grazing involves rotationally grazing three or more pastures and moving cattle frequently according to forage availability and management goals. Each pasture is grazed once during the grazing season. Ideally for this area, the season lasts from June 1 to October 10. In addition, each pasture is in a rotation system, so it is not grazed at the same time of the growing season every year. These practices allow grasses to recover and regrow after the grazing period. Many landowners may be tempted to use the pastures more than once in a growing season. However, this will result in the good plants being overgrazed. Eventually they will die out and be replaced by non-favorable plants.

A modified short-duration, high-intensity grazing system uses higher livestock numbers, or stocking rate. Cattle spread out over the pasture and utilize all available forage more evenly. With fewer larger pastures, cattle tend to overgraze the more accessible areas near water and underutilize the far corners of the pasture or steeper terrain.

However, short-duration grazing is more labor and management intensive. It requires more fencing and sometimes more water development. Pastures must be checked frequently because damage can be done quickly if livestock are allowed to overgraze a pasture.

Deferred Rotation Grazing

Deferred rotation grazing involves rotating four or five pastures with each one being grazed only once during the growing season. The last pasture in the rotation is not grazed (it is “deferred”) until the end of the season when plants have reached full growth. Every fourth or fifth year a different pasture is deferred and allowed to gain vigor following several consecutive years of being grazed during the growing season. The rotation of the other pastures is staggered as well. Of course, each operation is different; adjustments should be made according to topography, water, accessibility, class of livestock, and current range condition.

Rest Rotation Grazing

Rest rotation grazing allows one year grazing in a pasture with that pasture totally rested the following year. This system allows degraded rangeland to recover more quickly. Rest rotation works well in rugged terrain where livestock distribution is a problem.

Points to Keep in Mind

- Periodically resting pastures promotes plant succession, increases desirable species, reduces and improves sacrifice areas, improves forage harvest efficiency, and reduces animal selectivity.
- Stocking rates should be adjusted according to the carrying capacity of the rangeland.
- Livestock should be moved out of a pasture once utilization levels reach 50%.

- For more information on calculating stocking rates or setting up a livestock rotation plan for your ranch, contact your local Natural Resources Conservation Service or county Extension Educator.

Remember – by properly managing rangelands, you reduce the possibility of the introduction or spread of noxious and invasive plants.

Photo of cattle grazing in sideoats grama