W•Y•O
RANGE
FACTS
MP-111.05
January 2005

Livestock Grazing Distribution

Blaine E. Horn • Rangeland management educator • Big Horn Mountain Extension Area • University of Wyoming Cooperative Extension Service

The economic and ecological success of range livestock production is dependent upon the proper use of forage resources. Grazing distribution refers to the dispersion of livestock over a pasture. Areas within pastures that are consistently non-grazed, lightly grazed, or overused may significantly reduce the economic efficiency of a ranch. Ideal livestock grazing distribution occurs when the proper utilization of forage plants extends uniformly over an entire pasture, and over and underused areas are eliminated. As a result, an increase in the stocking rate can be realized, especially once overused areas improve. Good grazing distribution can result in an increase in animal production on a per-acre basis because more of the available forage in a pasture is grazed, and more forage is produced in formerly overused areas.

Water

The lack of well-dispersed watering sources is a common cause of poor livestock distribution on many pastures. Often the most effective way to improve the uniformity of grazing is to increase the number and/or change the location of watering points. The development of water, especially in new locations on rangeland, can result in better utilization of lightly and non-grazed areas, resulting in an increase in the length of the grazing season through greater forage supply. In addition, problems with livestock use of riparian areas may be relieved if livestock are drawn elsewhere to water. It is recommended that watering points be no farther apart than 1.3 miles. Cattle in rough topography should not have to travel more than one mile to water, and in flat country travel distances should not exceed two miles. Although livestock will travel longer distances to water, it is not in the best interests of them or the range resource. Long distances between water can mean a reduction in animal gains because the livestock are expending more energy. It can also lead to less uniform utilization of available forage because areas close to water are overused while areas far away are used lightly or not at all.

Rotating access to watering points can improve the uniformity of pasture use. This practice will also allow vegetation around watering points to recover from grazing. It is often more economically feasible to develop a water source and control access to it than to implement a specialized grazing system due to the cost of building and maintaining fences.

Topography and Types of Livestock

Rugged topography is the second leading cause of poor livestock dispersion and should be accounted for in the development of any practice to improve animal distribution. The steepness and length of a slope can affect forage use by domestic and

wild animals. Although slope steepness influences the distribution of cattle, this factor does not operate alone. Water is usually found at the bottom of slopes, causing animals to congregate there. Plants near streams stay green and palatable longer than those on slopes, especially on sun-baked south-facing slopes.

Because various kinds of grazing animals will use different topography, this knowledge can be used to help improve forage utilization of a pasture. Mature cattle and horses have difficulty in traversing steep, rocky slopes, and cattle make little use of slopes steeper than 10 percent in grade. Sheep and goats, however, use these areas more readily. Sheep have been found to use slopes up to 45 percent. Yearling cattle will make better use of rugged terrain than cows with calves, and they also make better use of areas more distant from water. It is important to remember that the use of rugged rangeland by cattle will vary by breed as well as by individuals within a breed.

Livestock also prefer certain vegetation types. Cattle favor open grasslands over heavily forested areas and usually choose grasses over forbs and shrubs. Sheep will utilize a variety of plants while goats desire shrubs and forbs. Grazing by more than one herbivore species is a way to utilize more of the available forage resources and help reduce any one vegetational type from obtaining a competitive advantage over another.

Supplements and Rubs

Other tools available to improve grazing distribution include increasing the number and/or changing the location of supplements including salt, mineral and feeds, rubs, and oilers to entice livestock away from overgrazed areas and onto underutilized ones. As slope and distance from water increase, more locations should be utilized. However, supplements should not be placed near water. Livestock do not require water immediately following the intake of supplements and will often drink first, then lick or eat the supplement, and then return to grazing or ruminating. However, it may be advantageous to place supplemental feeds and salt in the same location because livestock are often more attracted to feeds than they are to salt.

Ordinarily one area to feed supplements should be established for every 30 to 40 head of cattle in flat country and for every 25 head in rough terrain. Enough of the supplement should be provided to last until proper forage utilization is attained. Producers should avoid locating supplements more than one mile apart and within one-quarter mile of water. In addition, supplement feed grounds should be rotated annually, and livestock should be taken to the new locations. Herded sheep bands on open range should be supplemented at or near their bedding grounds in the evening, away from overused sites near water. If this is done, the animals will settle for the night and stay on the bed-grounds, and there will be fewer tendencies for the flocks to leave than when supplementing occurs in the morning.

Fencing

Fencing large pastures into smaller units and implementing a grazing system or strategy is a common practice to improve livestock grazing distribution. The location, size, and shape of a pasture and the direction of livestock travel are important considerations in fence placement. Smaller pastures increase stock density, which reduces forage selectivity by forcing livestock to compete more readily for forage resources. As a result, pastures are generally grazed more uniformly. However, management should be intensified to ensure that range resources are not degraded and that animal health and production are not compromised.

Vegetation management practices such as fertilizing, seeding, burning, and mowing can be used to help improve grazing distribution, but generally they are utilized for specific problems.

Livestock distribution is just one component of good grazing management. Others include proper stocking rates, the seasons of use, the kind and proportion of livestock, and grazing systems.

For more information on the management of livestock on pastures and rangelands, contact a local University of Wyoming Cooperative Extension Service educator.