range MANAGEMENT pays

ARTMENT OF AGRICULTURE · PUBLICATION 1382 · 1968

RANGE MANAGEMENT PAYS

Alastair McLean[1] and W. C. Pendray[2]

The cattle industry is becoming increasingly important in the economy of British Columbia and its people. But the province's livestock industry supplies less than half the beef consumed in the province. To supply as much as possible of the rapidly growing demand for essential meats, stockmen must increase this production. One of the best ways is by proper range management.

The success of the cattle industry and the prosperity of the ranchers and all who rely on them for their livelihood depend on the efficient production and use of grass. The result will be more meat, better grades of meat, and higher dollar returns.

Range management practices are based on the basic needs of the range plants. Perennial plants store their energy in their roots and crowns, which produce the first growth the following season. Seed must also be produced. Even the longest-lived perennials finally die and have to be replaced by new plants. Some old growth must be left every year to return litter to the ground and to maintain the fertility and water-holding capacity of the soil.

THREE RULES OF GOOD MANAGEMENT

To keep your range in good condition and to avoid the ruinous effects of range depletion, follow these three basic rules of good management:

- Use your range in the correct season.
- Stock your range at the proper rate.
- Distribute the stock evenly on your range.

Use Your Range in the Correct Season

Do not turn stock onto the range until forage plants are well developed and can withstand grazing. The first leaves are produced from food stored the previous year; if these are repeatedly grazed off, eventually the plant weakens and dies.

In the spring, range is ready for use when wild sunflowers are in bloom, the new growth on bunchgrasses is at least 6 inches high, sod grasses and lower-growing types are 3 to 4 inches high, Sandberg's bluegrass is heading out, Johnny-jump-ups are withered, and the soil is firm and can hold the weight of animals without damage.

Locale also affects the season of use. In the mountainous rangelands of British Columbia, the range types and their proper season of use vary according to elevation. The sagebrush grasslands, where snowfall is light and disappears first, are the earliest ranges and may also be grazed latest in the fall. At progressively higher elevations, middle and upper or rough fescue grasslands begin to grow later in the spring and are snowed in earlier in the fall. At higher elevations, forest and alpine ranges are suitable for a still shorter season.

[1] Ecologist, Research Station, Kamloops, British Columbia.

[2] Director, Grazing Division, British Columbia Forest Service, Victoria, British Columbia.

Use each type of range only during the season for which it is best suited, and it will yield the greatest returns. Keep your grassland ranges, which are in short supply in British Columbia, solely for the critical grazing periods in winter, spring, and fall. For summer grazing, move the stock to the forest and alpine ranges at higher elevations as soon as these ranges are ready for use. If you move the stock off the open grasslands early enough, this range can put on good growth before summer dormancy. Also, fall feed can be produced, and plants will recover their vigor, set seed, and store food reserves to be ready for an early, strong start the next spring.

If you turn stock out on the range too early, the stock will destroy the vital spring range, which takes time and expense to restore. However, if you are forced to use the range too early because of a long winter, make sure the animals are off the range soon enough to allow adequate regrowth. In such cases, move the stock when the bunchgrasses have no more than half their season's growth, so that they will have time to grow and store food for regrowth in the fall and the following spring.

Stock Your Range at the Proper Rate

A range will produce only a certain amount of forage each year, depending on the climate and the soil. To maintain a healthy range and high production year after year, do not allow all the forage to be grazed. If you place too many stock on the range, they do not have enough to eat, gains are poor, and the range and the profits go down. It is not hard to tell when the range has been fully used. When about half the current year's growth remains at the end of the season, the range has been grazed to capacity. This carry-over forage is not waste, it is an investment in future crops. At the end of the season, allow light grazing on the moderately palatable plants but not on the least attractive plants. If stock is forced to graze on these less palatable plants, the better meat-building plants become overgrazed and the range declines. Vary the stocking rates when spring is late or weather is dry.

Maintain the long-lived perennial plants, which produce large quantities of nutritious forage. Their deep, fibrous root systems bind the soil to the slopes, and their sturdy crowns and dried stems break the force of water, which otherwise would wash away the soil. If these plants are weakened and destroyed, undesirable plants that have little or no forage value replace them. These poorer plants, with their sparse roots and top growth, do not protect the soil.

On range that is in good condition, plants are strong and thrifty, growth is abundant, seed stalks are numerous, new plants are present, and there is a high percentage of nutritious perennials. Also, there is adequate litter on the ground and the soil is open, rich in organic matter, and holds moisture readily.

Learn to recognize the plant indicators on your range. For example, your grassland range is in good condition if bluebunch wheatgrass and rough fescue are growing in profusion. Peavine and wild vetch are highly nutritious and, when abundant, indicate a good timber range site and good range condition.

On range that is in poor condition the valuable grasses have been destroyed and replaced by low-producing plants and weeds. The remaining forage plants are weak

and produce little feed. Soil is compacted, little moisture is retained, and topsoil is starting to wash away.

When the range is overgrazed, cheatgrass, big sagebrush, pasture sage, pussytoes, dandelions, and other worthless plants replace the more valuable plants. They produce little palatable forage and are poor substitutes for the grasses that could be maintained on the range by good management.

Distribute the Stock Evenly on Your Range

Make efficient use of all the forage available. If not controlled, stock tend to congregate in favored areas such as around water holes, in valley bottoms, and in choice meadows. These areas soon become overgrazed, production declines, and animals do poorly while feed goes to waste in other unused areas. Good distribution of stock depends on certain basic practices.

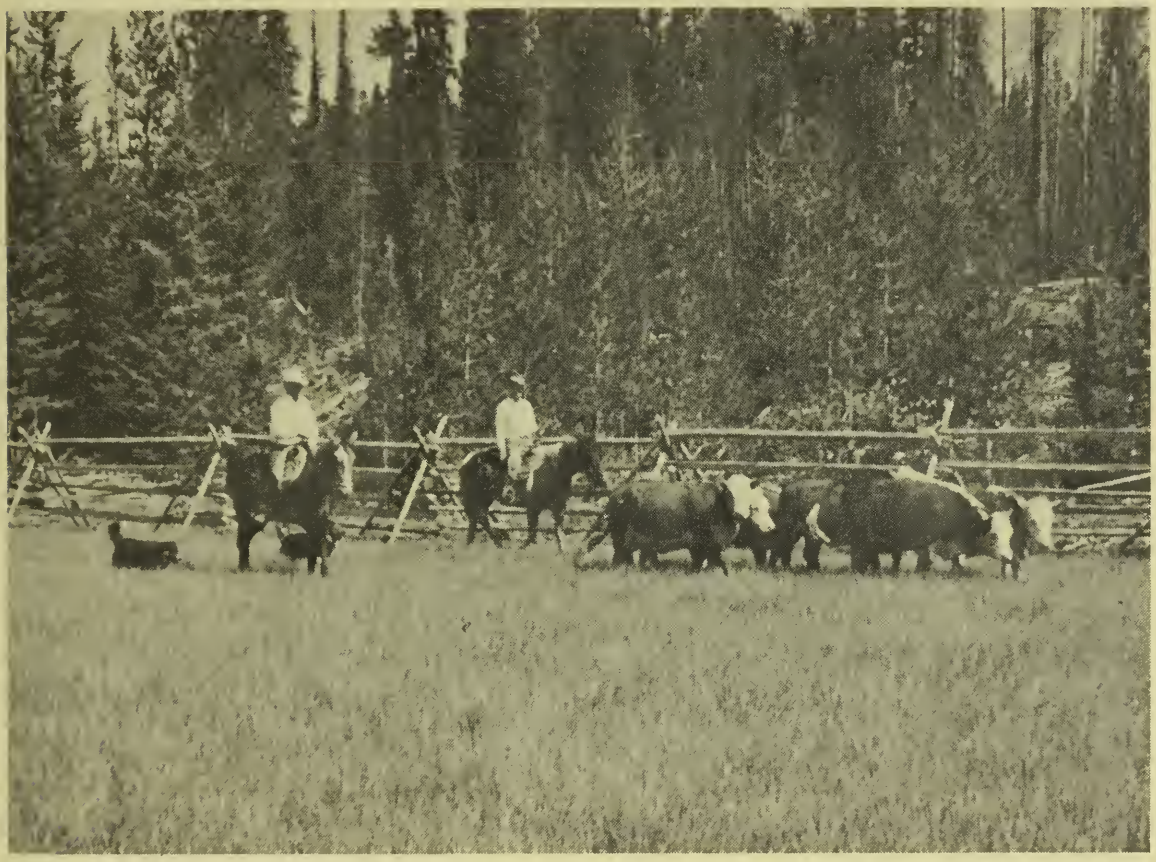

Figure 1. Move cattle to new range as soon as an area has been properly grazed.

Herding is the most important aid to improved cattle distribution on the range. It is essential to keep animals away from heavily grazed spots and to move them to fresh range, since they seldom do this on their own until after the range has been damaged. Watch to see that there is enough salt, watering spots are not dry, fences are tight, and bulls are well dispersed for proper service.

When cattle are moved into a new area, do not leave them at the boundary gate, but drive them to some of the salting spots so they will settle down quickly. After they have been moved, check to see that the calves are with their mothers.

If possible, divide the herd so that the cows and calves are placed on the best range. Yearlings, however, travel more and rustle better. It is often preferable to keep the yearling steers on a separate range so that they do not bother the cows and are available for early roundup if the fall prices make it advisable to market early.

Figure 2. Early marketing pays, since animals lose weight on fall range.

Get to know your herd and the group habits. When checking the distribution of animals on the range, remember that they graze most actively in the early morning and early evening and will show their location and distribution best at these times. Animals can be gathered most easily during the day when they are watering, salting, or resting; then they can be trailed in the cool of the evening or early morning.

Skillfully placed salt can greatly aid you in making even use of all your range. Stock can be encouraged to use range they would not ordinarily graze if salt is placed at least a quarter to half a mile from water and other areas of cattle concentration. Cattle do not normally move directly from salt to water, but they graze and wander considerably between the two. Provide a number of salting spots for each water development. Their location and distance depend on the water location, terrain, and density of shrub cover. If an area is to be grazed for a short time only, add more salting spots than for an area that has a long grazing season. The exact location should be fairly level and open and be easily accessible. When an area has been properly grazed, remove the salt to prevent overuse. When cattle are being turned out on an area where they may not stay, it often helps to withhold salt for a week or two before they are moved to the new range, where they should be well salted.

Withhold salt from permanent water areas until the forage near the temporary water has been used. Where there is a mixture of open and forest grazing, locate the salt in the forest to attract the cattle there. The result will be more even utilization of the field. Cattle can usually be gathered faster when the salt is removed from remote areas and is left in only a few key areas for speedy pickup.

Several good-quality watering places are needed to distribute stock evenly. Where natural water is inadequate, develop small springs or dugouts, because the distance stock will travel from water is the limit of usable range. Usually, stock will seldom travel more than half to 1 mile from water on normal mountain terrain that is not obstructed, and less on steep topography and rocky ground, where trails are poor. Better use can often be made of poorly watered range by grazing it during the cooler seasons when cattle need less water and sometimes when snow is on the ground. In some cases it is wise to fence off a water hole temporarily each year if the area around it becomes overgrazed and cattle will not stay away.

Figure 3. Dugouts are inexpensive to build, and they help to attract animals to under-used areas.

Cut trails through dense timber or deadfall to make all the usable range accessible to cattle. Combine direct routes with good grades and avoid sharp turns.

Seed logging roads and trails to encourage stock to move along them to new grazing areas.

Build fences, if necessary, to prevent animals from drifting from summer range too early in the season or to protect the areas of natural concentration from excessive use. Fences are merely an aid and not a substitute for the other necessary management practices. They may also be useful in separating the ranges for which

the cattle have different preferences, such as pinegrass and bunchgrass, or in controlling grazing in rotation plans.

Locate fences along divides, ridges, and breaks, but if possible do not cross established cattle trails and drainage ways.

These three rules of good management may be used on any range that is in reasonable condition. They do not cost much money, but they will help to bring a greater profit from more and better beef for as long as they are used.

Copies of this publication may be obtained from:

INFORMATION DIVISION
CANADA DEPARTMENT OF AGRICULTURE
OTTAWA

4M-12:68