

Rangeland Resources of Montana

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Montana encompasses slightly over 93 million acres with rangelands being a significant part of this land resource. The rangelands not only provide feed and forage for livestock and wildlife but also protect watersheds and provide recreation values which are of prime importance to the landowners and the public.

Within the borders of Montana are fifty-six million acres of rangeland and eleven and one-half million acres of grazable woodlands. This is 70 percent of the state's area. Approximately 70 percent of this grazing land is privately owned. Economic importance, social and cultural significance, and expanse and majesty show that rangeland is one of Montana's prime renewable resources. In recognition of the importance of the rangeland resource in Montana, the 1973 Legislature designated bluebunch wheatgrass as the State Grass.

Montana is a land of extremes, experiencing heat and cold, dry and wet, wind and calm. The extremely variable soils and vegetation throughout the state reflect these extremes. Elevations range from 1,800 feet above sea level (where the Kootenai River flows into Idaho) to the 12,850 foot heights of Granite Peak. The record low temperature registered -70 degrees Fahrenheit, and the record high is 117 degrees. Growing seasons in the state vary from 30 days in some mountain areas to 150 days in the lower Yellowstone Valley.

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Average annual precipitation varies from 6 inches in south-central Montana to 120 inches or more in some of the mountains west of the Continental Divide. Most of the rangeland area receives an average of 11 to 14 inches annual precipitation.

Geographically, Montana is divided into five major land forms: the Eastern and Western Glaciated Plains north of the Missouri River, the Eastern Sedimentary Plains in southeastern Montana, the Western Sedimentary Plains in the south-central part of the state east of the Divide, and the Foothills and Mountains. A variety of range sites exists in each of these geographical areas.

Montana is a great grass country. The early explorers and pioneers wrote in their diaries of the wondrous, waving seas of grass spotted with patches of shrubs and trees. When Lewis and Clark made their remarkable trek across Montana in 1805 they found the plains abounding with buffalo, elk, deer, antelope, bighorn sheep, grizzly bear, wolves, and coyotes. Prairie dogs, sagegrouse, and many other mammals and birds also were plentiful.

Before gold was discovered in 1862, Montana was strictly Indian territory, with an occasional white trapper, fur trader, or prospector. Although there was very little settlement in Montana prior to 1860, people from the East were swarming to California gold fields and Oregon valleys along the major



Bison grazed Montana's rangelands for centuries before being replaced by domestic stock.



Cattle and sheep provide a greater income than any other industry in Montana, bringing in millions of dollars each year. Ninety-one percent of the feed and forage for livestock is produced on privately-owned lands. SCS Photo

trails to the south. Approximately 500,000 people followed the "Big Medicine Road of the Whites" and its various cutoffs between 1841 and 1850. In 1850 alone, 55,000 immigrants traveled the Oregon Trail. In their outfits were at least 9,000 wagons and 36,000 oxen, not to mention horses, mules, milk cows, goats, and sheep. Traffic reached such proportions on the Oregon Trail that grass along the way was at a premium. Work steers could not plod in the yoke day after day and do well on short rations. They grew gaunt, weak, and footsore. Many of them were abandoned.

In 1850 Capt. Richard Grant and his Indian wife and their two sons, Johnny and James Grant, were living at the confluence of the "Stinking Water" or Ruby River and the Beaverhead River, near the present town of Twin Bridges in the southwestern part of the state. Capt. Grant was a former factor of the Hudson's Bay Company and maintained a base for the purpose of exchanging trade goods, trinkets and bad whiskey to the Indians for horses, furs, and dressed skins. An occasional gold seeker or other restless soul wandered through the area, leaving trail-weary, worn-out oxen to perish in the Beaverhead Valley. The Grant brothers found the oxen next spring fully recovered, fat, and sassy. They had wintered well on basin wildrye, rough fescue and bluebunch wheatgrass which grew abundantly in the mountain foothills and valleys. This sparked an idea, and the Grant brothers journeyed south to old Fort Hall on the Oregon Trail near the present site of Pocatello, Idaho. They traded dressed skins, furs, moccasins, and other Indian-made apparel for worn-out oxen. They trailed the weary animals back to the Beaverhead Valley and turned them out on grass to recuperate. The following Spring they returned to the Oregon Trail with fresh, rested oxen, which they traded for more played-out

cattle. The going trade-rate was soon to be one strong fat work animal for two thin, trail-weary critters. This was probably the earliest cattle operation in what was to become Montana.

Father DeSmet, a Jesuit priest, had come to the Bitterroot Valley (west of the Continental Divide) in 1841 to establish a mission with the Flathead Indians. He moved to the Mission Valley in 1850. Four years later, he had built up a herd of 1,000 cattle, most of which had been trailed in from Oregon. These cattle were to feed the Indians and keep them from traveling east of the mountains each year to hunt buffalo and make war with enemy tribes. Father DeSmet's cattle did not stop the Indians from hunting and fighting but did give them a more reliable food supply.

Gold was discovered between 1862 and 1864 at Gold Creek, Grasshopper Gulch, Alder Gulch, and Last Chance Gulch, all in southwest Montana. The hills swarmed with prospectors, and mining camps mushroomed wherever a strike was made. Suddenly there were thousands of hungry men to feed. Cattle ranches sprouted up all over western Montana to supply the mining camps with meat. Most of the cattle for these ranches were trailed from Oregon. Many were descendants of the early Spanish cattle that had come from Mexico and California.

While cattle herds were growing in western Montana, the eastern plains were dominated by Indians and vast herds of buffalo. Indian hostilities did not settle down until after the Battle of the Little Bighorn in 1876 and Chief Joseph's surrender in 1877.

The next step was clearing the range of bison. The very existence of the plains Indians was built around the buffalo herds. Bison were the cattle of the Indians, and extermination of the herds was the final blow to the native people. This

extermination of the buffalo was encouraged by the government as a deliberate means of breaking the Indians' spirit and forcing them onto reservations.

By the mid-1880's buffalo in Montana had become a rarity. Ranges of the western half of the state had been stocked to capacity and beyond with livestock. The Indians were under a semblance of control and most of the buffalo annihilated. Cattle were being trailed into eastern Montana by the hundreds of thousands. By 1883, an estimated 600,000 had been trailed in from the south, in addition to considerable numbers of sheep and horses. In many instances, rangelands were badly abused by overgrazing with a general disregard for the natural range resources. Little or no consideration was given to planning for future management needs.

This began to change late in the 19th century and into the early years of the 20th century, generated by several dramatic events including the catastrophic winter of 1886-87. Thousands of head of livestock died when seriously overstocked ranges collided with a long, severe winter. Rangelands were no longer viewed as limitless. Some control of livestock was needed to protect the resource.

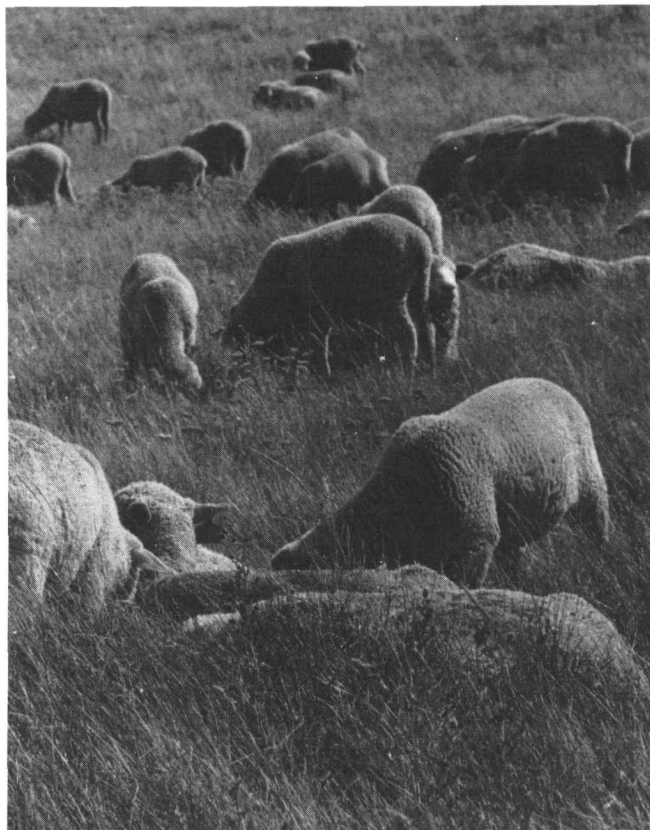


This native range in "top" condition has an abundance of old grass left over from last year to go with the succulent new growth. "Mama" gets a full belly every day, produces lots of milk, breeds well and weans heavy calves. Erosion is at a minimum. SCS Photo

One result of this public concern was the establishment of the United States Forest Service in 1905. The concept of range condition as a management tool had its beginning about this time. Some early range seeding trials and systematic range plant collections date from 1907-1910. Long-term studies were initiated on range plants and their climatic relationships.

More and more attention was focused on rangelands and their management as the century progressed. At first, the newly designated National Forest lands received most of the attention, but later other areas were brought under more controlled management. Passage of the Taylor Grazing Act in 1934, which established the Grazing Service (today the Bureau of Land Management), reflected national concern for the public domain lands.

Significant early range research was accomplished in Montana at the Vigilante Experiment Station in the Ruby River Valley (Gravelly and Snowcrest Mountain Ranges) and at Ft. Keogh Experimental Range near Miles City. Much of



Good grass and fat lambs.

our knowledge of plant ecology, grazing systems, climatic effects on plant growth, and range animal management originated with these studies. Range research continues to be actively pursued in Montana through Montana State University's Agricultural Experiment Station, the University of Montana's Forestry Experiment Station, the Ft. Keogh Range Livestock Experiment Station (US Agricultural Research Service), and Intermountain Forest and Range Experiment Station (US Forest Service).

In spite of efforts to develop effective range research and management programs, range abuse still continued. The drought years of the 1930's further decimated the rangelands of Montana. However, lack of feed and water during the "dirty thirties" caused livestock numbers to be reduced drastically by pure necessity. Meanwhile, some Montana ranchers and other private land owners were leaders in early range management. The Mizpah-Pumpkin Creek Grazing Association in southeastern Montana was formed in 1928 to control livestock grazing and improve range conditions on a large area of mixed ownership. The Montana program for range management was used as a pattern in developing federal grazing regulations and administration when the Taylor Grazing Act was passed in 1934. Montana also was one of the first states to implement Land Utilization programs to convert abandoned cropland back to rangeland.

Climatic conditions were generally favorable for about twenty-five years following World War II. Technical help was available through Soil Conservation Districts to assist ranchers in developing and carrying out range and ranch management plans designed to the needs of the individual operation. In recent years, agency personnel from the Soil Conserva-

tion Service, Extension Service, Bureau of Land Management, Forest Service, Department of State Lands, Department of Natural Resources and Conservation and the universities have teamed together with Soil Conservation Districts and individual ranchers to bring about rangeland improvement.

One major effort has been formulation of the Montana Rangeland Resource Program which works through county range leaders to improve rangelands. A rancher in each county is designated as a Range Leader. He and his committee establish various programs concerning the range resource in their area. The Montana program is conducted entirely by volunteers, although state funds have been appropriated by the Legislature for program administration. The Program had been in successful operation for about six years when the state legislature passed a bill called the "Montana Rangeland Resources Act" in 1977. The Montana Rangeland Resource Program was now a statutory part of Montana State government under the first rangeland resource law in the United States.

The largest single demand on Montana's rangeland today is production of forage for domestic livestock. Cattle and sheep provide a greater income than any other industry, bringing millions of dollars a year into the state. Nearly 90 percent of livestock grazing is done on privately owned lands. Costs have increased dramatically in the last decade, and inflation has seriously eroded the livestock industry. Many rangeland acres have been inappropriately converted to cropland, increasing the burden on the remaining range. Grasshopper infestations and rather severe droughts in parts of the state also have taken a toll. In spite of these problems, the existing range has improved because of better grazing management practices being applied by ranchers. Today, over half of Montana's rangelands are in good to excellent condition.

The major goal of the Rangeland Resource Program is to maintain good and excellent condition range and improve range in poor and fair condition. Research conducted at experiment stations throughout the western range country has consistently shown the value of proper stocking and high condition ranges. Good range management means high calf and lamb percentages, heavy weaning weights, and higher net returns to ranchers. Urban incomes in agricultural communities also benefit from the increased ranch income being spent for services throughout the state.

Montana has long been famous for its wildlife. However, during the first part of the century, wildlife populations decreased until nearly every kind of animal was scarce. Wildlife numbers have increased considerably since about 1950, from the improved range condition, additional water development (most installed by ranchers), and improved hunting regulations.

Both wildlife and livestock benefit from good range management. Generally, big game animals and livestock are reasonably compatible if both are managed properly. This is fortunate since sixty-five percent or more of the feed for Montana's wildlife is produced on privately owned lands. Interest in wildlife increases as the human population grows, and undoubtedly will continue to grow in Montana. To meet this demand, rangeland conditions must be improved at an accelerated rate.

Montana is a major upstream producer of fresh water. Dependable flow of water from rangelands depends upon a protective cover of vegetation. This requirement does not

restrict the harvest of grass, but it does mean that good range condition must be maintained. Under these conditions runoff is controlled, subsoil water storage is increased, and streamflow is maintained on a year-round basis, providing a more dependable supply of water.

The need for recreation has grown rapidly in recent years mainly because people have more leisure time. This creates another demand on rangeland. The grasslands offer a variety of recreational uses such as hunting, fishing, and camping. In an average year, two and a half million man-days of hunting are enjoyed by sportsmen in the state, and much of this takes place on rangeland. Today people have slowly but steadily shown interest in many other forms of enjoyment that can be experienced on rangeland, including photography, bird and animal watching, scenic beauty, artifacts, historical sites, gems, cross-country skiing, snowmobiling, hiking, backpacking, etc. Rangelands also provide vast open spaces for quiet and solitude.

Much of the economy and future of Montana is dependent upon rangelands. Proper range management on either private or public lands will be achieved if individuals responsible for the grazing animals understand the basic needs of plants and their response to grazing. To appraise the resources of rangeland and develop information useful in its management, it is essential that three basic factors be considered—soil, climate, and vegetation. Range management is dependent upon an understanding of the potential production that might be expected in normal years from a given kind of range. This ecological approach is based on the premise that top-condition native vegetation will result in the highest practical returns of forage production for livestock or wildlife, recreation values, and watershed protection. This approach provides the highest degree of natural soil stabilization and water conservation.

Historically much of Montana's rangeland was overgrazed or mis-managed before or soon after the turn of the century. With more experience and understanding, the management of these lands has improved tremendously. Today, over half of the state's ranges are in good to excellent condition. The goal of the Montana Rangeland Resource Program, and indeed of all range users, is to accelerate range improvement as rapidly as possible and to preserve this priceless resource for future generations.

