Colorado State University Cooperative Extension programs are helping Coloradans
- strengthen the management, productivity and health of the state’s forage, range and grassland resources;
- sustain grassland systems that add to and enhance the state’s diverse natural resources;
- learn best management practices that contribute to well-managed grazing lands.

The Costs...

- U.S. Natural Resources and Conservation Service studies show that 30% of America’s agricultural land, about 112 million acres, is eroding at excessive rates; other problems such as urban sprawl and salinization also threaten cropland productivity and long-term soil health. Between 55–60 million acres of soil are affected by build-up of salts caused mainly by irrigation of poorly-drained soil.
- A recent NRCS Inventory showed that U.S. cropland decreased by 39 million acres since 1992, rangeland decreased by 10 million acres, and between 1992-1997, the U.S. converted about 11.2 million acres of ag land to development. In Colorado, nearly 1.35 million acres of agricultural land were converted to other uses during that 5-year period.
- Both overgrazing and undergrazing can result in rangeland or grassland problems. Overgrazing can lead to a bare packed ground surface very susceptible to movement of water and erosion. Undergrazing can cause the pasture to grow weedy and then animals graze selectively on the most nutritious, palatable plants ignoring the rest; this causes uneven plant regeneration and reduced sustainability of grazing land.

Strengthening Health and Management of Colorado’s Range and Grasslands

The nation’s forage, range, pasture and grassland resources, covering about 55% of the land area in the United States, make a vital contribution to the nation’s environment and to its economy. Most important are the irreplaceable benefits provided to the public – food and fiber, wildlife habitats, aesthetically pleasing landscapes, and environmental protection for soil, water and air. Grasslands play an important role in environmental quality by providing biodiversity of plant and animal populations, wildlife habitat and green space around expanding urban and suburban areas; they reduce soil erosion and prevent stream and groundwater contamination. Forages and grasslands are a foundation for sustainable agriculture by serving as an economic and environmental safety net. Rangeland contributes directly to the economic, social and environmental sustainability of rural America. Livestock producers and small-acreage landowners who make use of pastures and grazing realize direct economic benefits for themselves and their communities. The forage-livestock industry contributes more than $60 billion in farm sales annually, and the $11 billion hay crop is the third most valuable U.S. crop after corn and soybeans. In the last decade, government programs and land-grant university research and education have helped America’s agricultural producers make remarkable improvements in soil and land conservation. Adoption of effective conservation practices including conservation tillage, terracing and contour farming cut soil erosion by nearly one-third. Cooperative Extension scientists and educators continue to work with landowners and producers to provide education for stewardship of forage and grassland resources.

Photo courtesy of USDA NRCS.
Putting Knowledge to Work

Two of the most important benefits of grasslands are the control of soil erosion and the preservation of water quality. They provide perennial ground cover that helps protect the environment in a wide variety of ways – reduced runoff, increased infiltration that recharges aquifers, stream-bank protection, diverse flora and wildlife habitat, renewable biomass crops, aesthetically pleasing landscapes, carbon sequestration, and disturbed area stabilization and reclamation. Properly grazed pastures and grasslands have a safe level of vegetative cover remaining to increase water infiltration, protect the soil from rain-drop impact and reduce the speed of water flow across the soil surface. (Natural Resource Conservation Service, 2003)

Almost 75% of the nation’s wildlife live on private land, most of which is open-space rangeland and grassland on farms and ranches. These highly diverse lands, extending from eastern pastures and hay fields to western prairies and deserts, provide habitats for a multitude of plant and animal life, including 20 million deer, 500,000 pronghorn antelope, 400,000 elk, wild horses, and a number of endangered species. Songbirds, pheasants, and countless smaller animals thrive in these habitats. They also play a vital role in providing open space, air and water quality, and a variety of recreational opportunities. (Agricultural Council of America, 2002; American Forage and Grassland Council, 2001)

The Payoff...

- Productive rangelands are key to economic sustainability of western agriculture and the foundation of the U.S. forage-livestock industry with its 60 million beef and dairy cattle and 8 million sheep that contribute more than $60 billion in farm sales annually. Range livestock production represents almost one half of Colorado’s total agricultural receipts. The predominant land use in the state’s Southeast Region is for range livestock, especially cow-calf operations, which are dominated by season- or year-long use of pastures. Cooperative Extension provides education to help producers understand forage issues, supplemental water requirements, soil fertility, nutrient availability, business management and how to make fullest use of resources at their disposal.

- Producers in western Colorado, like in many parts of the West, have experienced conflict over livestock grazing on public lands. In Colorado’s Tri-River Area, Cooperative Extension, the U.S. Forest Service, Bureau of Land Management, Natural Resources Conservation Service and ranchers designed a “Range Management School” to address this conflict. The primary objective of the School is to help grazing permit holders evaluate forage and changing range conditions while improving communication between federal land managers and ranchers. Of the more than 2,000 permittees, federal land managers, environmentalists and private range owners who have attended, 86% reported increased knowledge about how to integrate production practices with environmentally sound decision-making; 65% reported reduced production costs due to improved or more efficient management practices. The School has directly impacted improved grazing management on over 4 million acres of public land.

- In fast-growing Larimer County, public open-space managers, homeowners associations and small-acreage residents have joined farmers as land stewards, and many want to return the land to native habitat. Cooperative Extension with the Natural Resources Conservation Service, presented a five-day short course titled “Shifting the Picture: Prairie Improvement and Re-vegetation.” Two dozen participants experienced hands-on studies at project sites performing resource inventories and developing re-vegetation plans; all reported increased knowledge about enhancing the quality of natural resources on their land.

- For three years, Cooperative Extension in Routt County had received increased requests to help with an expanding grasshopper infestation. After researching control methods and providing information on best options to landowners and residents, the Extension agent coordinated treatment on 30,000 acres of land using a method developed by the University of Wyoming that used less pesticide, achieved 85% to 90% control, and saved landowners $70,000 over conventional control methods.