Rangeland Management Benefits Livestock and Wildlife

Mary Peterson, Kenneth Lutz and Ben Berlinger

Total resource management is bringing multiple benefits to the Waldroup Ranch near Branson in southeast Colorado. "I kept thinking that we should be getting more production out of the grasslands," says ranch owner Jerry Winford. "I was looking for help in seeing what we could do differently."

Winford had read some articles on Holistic Resource Management (HRM) by Allan Savory. When Savory was scheduled to give a presentation in Las Animas, Colo., he decided to go. HRM principles taught him to look at the whole instead of just focusing on one aspect of ranching. After attending HRM Rancher School in 1985, Winford made a commitment to apply the principles to the everyday operations of the Waldroup Ranch.

Winford, with the help of Kenn Lutz, USDA Soil Conservation Service (SCS) district conservationist in Trinidad, Colo., conducted a thorough evaluation of the ranch conditions and resources. They then set up a long-range grazing plan to improve and diversify the rangeland resources and production.

At the School, Winford learned about time dimensional grazing—planned grazings based upon plant growth and adequate recovery periods between grazings. He decided that this would be a major part of his long-range plan to improve the conditions of the rangeland.

Using the time dimensional grazing concept, Winford looks at the grass plants. Previously, if he saw green when he looked out at the range, he thought he was doing well.

"That's the first thing I learned with my training," says Winford. "That (looking at the range) isn't the answer. You need to be looking straight down at the ground to see what's going on under your feet. Not only do you need to look at the grass plants, but you also need to be concerned with the soil surface. The soil surface is the key to getting something to grow out there."

Ben Berlinger, SCS range conservationist in La Junta, Colo., explained that time dimensional grazing gives Winford the maximum control over the severity and frequency of grazing on grasses. In this way, he minimizes overgrazing while at the same time allowing more of the forage plants in each pasture to be evenly utilized by his livestock.

Winford starts by deciding the number of herds he'll run. This determines the number of pastures he will have to allocate to each herd. Then Winford figures out the minimum and maximum grazing periods for each pasture.

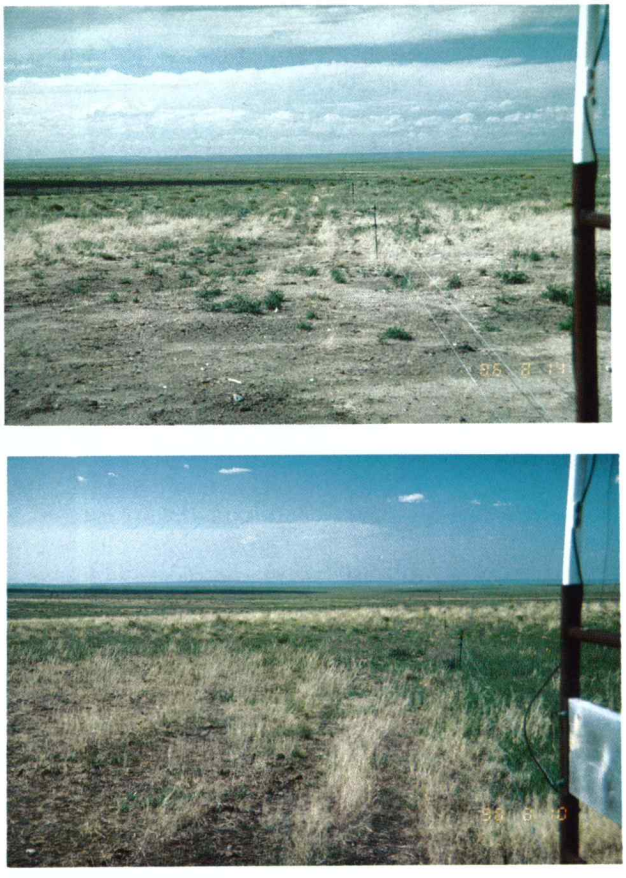
He usually averages two herds—one young herd and one brood cow herd—on about 30 pastures. Winford has been using 45 days for the minimum rest period and 90 days for the maximum.

After breeding season, Winford combines the two herds. He then re-plans his grazing moves because he has all the pastures available to the one herd. The cattle usually stay in one pasture for four to seven days, depending on the plant growth conditions.

Winford uses portable electric fencing in addition to his permanent fences to divide his ranch into the 30 pastures. He says he still needs to work on this aspect because the pastures range from 200 to 900 acres. Winford believes smaller pastures are better.

Because of limited water, Winford has developed an extensive watering system. He has installed over 18 miles of pipeline that carry water to 21 watering facilities located in various pastures around the ranch.

The cell centers are purposely made small. Berlinger says that Winford built them small so that the cattle don't



The west center pasture on Waldroup Ranch before (1986) and after (1990) using a planned grazing system to improve his rangeland. Photos by Kenn Lutz.

Mary M. Peterson is Public Affairs Specialist, SCS, Lakewood, Colorado; Kenneth E. Lutz, District Conservationist, Trinidad, Colorado; and Ben P. Berlinger, Area Range Conservationist, La Junta, Colorado.

Monitoring the rangeland annually. Photo by Kenn Lutz.

congregate inside the cell centers. "The cattle don't have room to lie down around the water tanks, so after drinking the water, they return to the pasture. This provides less stress on the livestock while facilitating easy livestock moves from one pasture to another," says Berlinger. SCS provided Winford with technical assistance in planning and constructing the pipeline and watering system. SCS also provided cost-share money for these under the Great Plains Conservation Program.

Another important part of Winford's time dimensional grazing is the monitoring of the process. Results are monitored by fixed photo points and annual random sampling of the vegetative responses in key locations.

Lutz says that Winford's planned grazing system has resulted in increased vegetative production, species diversity, and ground cover. All improvements on the ranch have been installed to benefit livestock production and improve range condition. Benefits to wildlife have been secondary in nature, but, nonetheless, an important part of Winford's goals.

The ranch property has historically been home to resident populations of antelope and mule deer. The present antelope population is among the best in southeastern Colorado and compares to any within the state. The mule deer population is small but of good quality with "trophy bucks" residing within the property boundaries.

Winford considers the resident wildlife population an asset rather than a liability. Included in the long-range plan for the ranch is the realization that the existing wildlife species can be of assistance with the improvement of the land and are renewable resources that should be managed for profit and public use.

Winford was instrumental in organizing a group of seven adjoining landowners who in cooperation with the Colorado Division of Wildlife (DOW) established the Mesa de Maya Wildlife Ranching Area. The ranchers, with assistance from the local DOW district wildlife managers and SCS, developed a long-range management plan for

Two hunters who participate in the Colorado Wildlife Ranching Program show off their two prized bucks. Photo by Mary Peterson

pronghorned antelope and mule deer populations.

The goals of this plan are to increase public access, preserve and improve wildlife habitat, and develop cooperation among DOW, sportsmen, and landowners. Under the Colorado Wildlife Ranching Program, the landowners work directly with the DOW on harvest rates, long-term population goals, and flexible hunting seasons that are compatible with ranching operations.

Through this program, over 159,000 acres of private and state lands in the Mesa de Maya Wildlife Ranching Area have been opened for public use. In 1991, over 200 hunter days of public use on this area were recorded. Habitat is being maintained and improved by proper grazing management and the development of additional water sources.

Winford says, "The Colorado DOW's Wildlife Ranching Program is a good tool that allows the private landowner to make use of public hunting to the benefit of the sportsmen and landowner."

The landowners and DOW officials agree on the number of permits to be allocated for each area. The landowners then market the permits however they see fit. Some market the permits themselves, some market the permits to outfitters who in return market them to hunters, and some give them away. The public has overwhelmingly accepted this program.

The rangeland on Winford's ranch is dominated by Loamy Plains and Shaley Plains range sites. Dominant grasses are blue grama, western wheatgrass, sideoats grama, Indian ricegrass, New Mexico feather grass, alkali sacaton, and little bluestem. Forbs that are frequently found on the ranch are scarlet globemallow, purple prairie clover, vetches. Winterfat, fourwing saltbush, James Frankenia, Bigelow sagebrush, pale wolfberry, and one-seeded juniper are commonly occurring shrubs.

The landscape is dominated by the short-grass prairie and pinon juniper vegetation types. The topography is gently rolling uplands. The average precipitation is about 12 inches.

On the Waldroup Ranch, the whole Winford family—Jerry, his wife Karen, their two sons Allen and Justin, and Winford's father Lloyd—is part of the decisionmaking process.

As far as long-term goals, Winford wants to be able to run more cattle, manage wildlife populations, and improve the land at the same time. He says he knew he had to run more cattle to make money, but he didn't think there was any way he could. Winford thought the land was stocked with all the cattle he could possibly run without hurting the land.

He says, "I don't want to increase my cattle numbers and sacrifice the land." Now he sees that he can increase the number of cattle and improve the productivity of the land at the same time. To Winford, this is the best of both worlds.

High Technology on the Range

John Capurro, Gary Brackley, Chris Pacheco and Liz Warner

More and more demands are being made of western rangeland in spite of its vastness and limited accessibility. Effective range management requires accurate resource data but time constraints make it difficult to collect it in a timely manner. All of these factors necessitated a new data collection system.

One solution is the SNOTEL (SNOwpack TELemetry) system operated by the USDA Soil Conservation Service. This system, operational since 1977, gathers daily sensor data from 564 remote sites including minimum, maximum and average air temperature; snow water equivalent; and daily precipitation.

These data, while useful, are insufficient to assist range managers in deciding when remote range will be ready for grazing and the possible forage production from these areas. SCS employees assembled electronic equipment capable of gathering the missing data. The additional sensors measure relative humidity, solar radiation, wind run, wind direction, fuel moisture, soil temperature and soil moisture.

A study site for the SNOTEL system was selected within the Sheldon National Wildlife Refuge in northern Washoe County, Nevada. SCS and the U.S. Fish and Wildlife Service signed a cooperative agreement authorizing installation and operation of the site.

The location was chosen for two reasons. First, manually collected data were available. Secondly, the location represented two range sites common throughout northwestern Nevada, northeastern California, southeastern Oregon and southwestern Idaho.

The daily data are transmitted to the SCS West National Technical Center in Portland, Ore. Interested individuals can call the computer and review and retrieve collected data whenever they desire.

John Capurro is District Conservationist, Reno Field Office, SCS, Reno, Nev.; Gary Brackley, State Range Conservationist, SCS, Reno, Nev.; Chris Pacheco, Water Supply Specialist, SCS, Portland, Ore., and Liz Warner, SCS Public Affairs Specialist, Reno, Nev.