

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.



October

1987

Volume 8, Number 7

25622

.56

Reserved

DED

# **Soil and Water Conservation News**

United States Department of Agriculture  
Soil Conservation Service

**Rangeland Conservation Improves Forage,  
Protects Resources**



*Soil and Water Conservation News* is the official magazine of the Soil Conservation Service. The Secretary of Agriculture has determined that publication of this periodical is necessary in the transaction of public business required by law of this Department. Use of funds for printing *Soil and Water Conservation News* has been approved by the Director of the Office of Management and Budget. *Soil and Water Conservation News* (ISSN-0199-9060) is published 12 times a year. Postage paid at Washington, D.C.

Magazine inquiries  
Send inquiries to: The Editor, *Soil and Water Conservation News*, Public Information Division, Soil Conservation Service, U.S. Department of Agriculture, P.O. Box 2890, Washington, D.C. 20013-2890.

Subscriptions  
Send subscription orders to:  
Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402

## Comments:

### From the SCS Chief

## Helping Ranchers Make Management Decisions

I've spent most of my life ranching, and I know that conservation is important to lasting success. Good ranchers know that good management and conservation go hand in hand. And most of the private landowners who control nearly two-thirds of the Nation's range resource are responsible managers. They know that increasing forage production also protects and conserves our soil, water, and wildlife resources.

But, today's range economy and range environment are complex, and many ranchers need technical advice in making timely and practical management decisions. Never has there been a greater need for more precise information on range management.

To provide our rancher clients with the best assistance we can, the Soil Conservation Service is working to stay on top of the latest rangeland management research, technology, and techniques. SCS and the U.S. Department of the Interior's Bureau of Land Management have a joint team studying the relationship between soil and range plant communities. SCS is working closely with other U.S. Department of Agriculture agencies—the Agricultural Research Service, Cooperative State Research Service, and Economic Research Service—and the Cooperative Extension Service on specific rangeland research and education needs.

SCS is improving its automated data processing, data bases, and computer software for evaluating rangeland use and condition. The 1987 National Resources Inventory will pay special attention to nonfederal rangeland and will gather much needed information on acreage needing brush management.

SCS is strengthening its assistance to ranchers who are managing rangeland to achieve benefits not only for producing livestock, but also for producing wildlife, providing hunting opportunities, increasing recreation potential, and improving water yield. In addition, the SCS plant materials program and range staff are helping ranchers decide on suitable cover, find seed, and develop sound maintenance plans for land going into grass under the Conservation Reserve Program of the Food Security Act of 1985.

SCS is making a concerted effort to understand more about range hydrology to help ranchers understand the effects of range management on water quality and water quantity.

Most important of all, we are keeping our assistance in range management attuned to the economy of the times. We are keeping our eyes open to management alternatives and to their effects on the producer and on the entire local community.

Our aim is to help ranchers make the best decisions possible for their land and water and for their livelihood.



Cover: This well managed Wyoming rangeland produces high quality forage to support livestock and wildlife and protect soil and water resources. (Photo by Ron Nichols, photographer, SCS, Washington, D.C.)

All programs of the U.S. Department of Agriculture are available to everyone without regard to race, color, national origin, religion, sex, age, marital status, or handicap.

## On the Range With WEPP

It's hot in Cottonwood, S. Dak. For days the temperature has been climbing to over 100 degrees F., baking the landscape. Then suddenly it rains. What happens to the soil?

This is what researchers from the U.S. Department of Agriculture (USDA) wanted to know when they set up rainfall simulators this past July on two rangeland sites at the Cottonwood Experiment Station and another in nearby cropland. First they collected soil and plant data from the test sites, then they turned on the "rain" and measured the amount of soil being washed from the sites.

The researchers are from USDA's Agricultural Research Service (ARS) and Soil Conservation Service. They are gathering data at different field sites across the Nation as part of the Water Erosion Prediction Project (WEPP). The data will help in the construction of a model for predicting soil erosion by water that will eventually replace the widely used Universal Soil Loss Equation.

The Cottonwood sites normally receive 14 to 18 inches of rainfall each year and are on clayey Pierre soils. These soils are used extensively for rangeland in the State. Rangeland sites in excellent condition support western wheatgrass and green needlegrass, and sites in fair condition support short grasses such as buffalograss and blue grama.

One of the rangeland sites tested was judged to be in excellent condition, and the other was in fair condition. One plot at each rangeland site was scraped bare of vegetation to measure the erosion rate on land unprotected by vegetation. The cropland site, which was also scraped bare, had previously been cultivated for several years in a winter wheat/fallow rotation. As expected, the data revealed significantly less runoff and soil erosion on the range site in excellent condition than on any of the other sites.



Measuring and recording the occurrence of plant species and the percent of plant cover on one of the WEPP rangeland test plots, in photo at left, are Mark Weltz, in foreground, an ARS range conservationist, and Arnold Mendenhall, SCS State range conservationist in South Dakota. Below, researchers have turned on the "rain" and are collecting runoff samples for later analysis and recording the rate and flow of runoff. Runoff samples from the bare rangeland plot will be compared to those from the plots protected by plant cover.

Photos by Tim McCabe, photographer, ARS, Beltsville, Md.



# Seeing Is Believing

**B**efore they spend their time and money on seeding recommended conservation plants, ranchers in northeast Oregon have a chance to see the plants growing under local soil and climate conditions.

Thanks to the efforts of a northeast Oregon rancher, the Umatilla County Soil and Water Conservation District, and the U.S. Department of Agriculture's Forest Service and Soil Conservation Service, a 4-acre area of poor condition rangeland has become a demonstration site for drought-tolerant plants.

The project began in 1985, when Cunningham Sheep Company manager, Mac Levy, asked SCS for a seeding recommendation for rangeland with low annual

rainfall. Levy was looking for an alternative to intermediate wheatgrass and alfalfa that he had seeded on several hundred acres of his ranch as well as other seedings that had not established well. Levy provided the land, equipment, labor, and much of the seed to set up the demonstration area so that he and his neighbors could watch how different range plants perform in the 10- to 12-inch annual rainfall zone.

SCS provided technical assistance and more than \$800 in special range funds for designing the seeding, buying plant materials, building a gate, and installing signs to identify the plants. The SCS plant materials centers in Pullman, Wash., and Aberdeen, Idaho, also provided plant materials for the demonstration site. The Forest Service's Forestry and Range Sciences Laboratory in nearby LaGrande, Oreg., provided shrubs and will help with designing plantings to improve wildlife habitat.

In February 1986, the demonstration plot was seeded to more than 20 species of grasses, legumes, and forbs, such as 'Secar' bluebush wheatgrass, 'Covar' sheep fescue, 'Ladak' alfalfa, 'Sherman' big bluegrass, fourwing saltbush, and winterfat. The objectives of the project are to enable ranchers to observe the adaptation of different drought-tolerant plants to local conditions and to promote the use of plant materials for erosion control, weed control, livestock forage, and wildlife habitat.

**Dean P. Moberg,**  
soil conservationist, SCS, Pendleton, Oreg

**Hugh Barrett,**  
State range conservationist, SCS, Portland, Oreg.



Ranchers in Umatilla County, Oreg., can take a close look at range plants adapted to the area's low annual rainfall at this conservation plant demonstration site.

Photo by Doug Bishop,  
public affairs specialist,  
SCS, Portland, Oreg.

# Burning Improves Oklahoma Rangeland

**A**nimals and the weather once managed Oklahoma's rangelands. Herds of buffalo and deer would graze an area off and then move on to fresh grass, allowing the grazed areas to recover. Wildfires kept many plants in balance and improved the palatability of others. As the area was settled, fences were built to establish a new management system, a system that often meant overgrazing of plants and control of wildfires.

This kind of system has unknowingly meant deterioration of thousands of acres of rangeland allowing such problems as the infestation of eastern redcedar trees. A survey done by Soil Conservation Service field offices in Oklahoma in 1985 showed that redcedar had become a problem in 33 of the State's 77 counties. Of the almost 15 million acres of rangeland, eastern redcedars are found on about 18 percent, or 3.5 million acres.

Controlling wildfires has allowed cedar to almost completely take over some rangelands. Today, SCS is working with

landowners through local conservation districts in using prescribed burning as a control for cedar and other undesirable plants. "There are problems with burning," said Mark Moseley, SCS State range conservationist in Stillwater, Okla. "Fire is not as effective on cedar over 5 feet tall, and a rancher must be able to recognize the right conditions to burn. The main consideration on the rangeland is ensuring there is adequate fuel, such as standing grass, to carry the fire for a good burn. This usually means deferred grazing for at least a year and many ranchers feel they have to graze the land. Grazing management is perhaps the most important factor when planning a burn, both to ensure adequate fuel and to favor the desired plants following the burn."

Prescribed burning is catching on in Oklahoma. Use of prescribed burning has quadrupled in the past 5 years according to Moseley. SCS helps landowners prepare burning plans. These plans outline what the

landowner's objective is and sets out how the burn should be carried out. "Just setting a fire and burning without an objective and plan can often do more harm than good," Moseley said.

While the control of cedar has sparked an interest in prescribed burning, landowners are also finding other benefits. Removing old growth from plants can improve distribution of grazing and improve wildlife habitat.

Art Staneart, a Pawnee, Okla., rancher, has used prescribed burning for 3 years. "I got rid of most of the cedar trees and greatly improved my stand of grass," said Staneart. "The quail and deer populations have increased, too, which really helps since I sell hunting rights on my land."

Prescribed burning has proven to be a good management tool on Oklahoma rangelands, and Moseley feels the use of burning will continue to grow.

**F. Dwain Phillips,**  
public affairs specialist, SCS, Stillwater, Okla.



SCS district conservationist in Pawnee, Okla., Loran Zweiacker, foreground, and rancher Art Staneart look at excellent stand of native grass on area improved by prescribed burning. Staneart says that prescribed burning improves rangeland vegetation and benefits livestock and wildlife.

# Gulf Coast Ranchers Fight Brush, Raise Grass

**R**anchers in the Gulf Coast counties of Texas raise and sell cattle, but many are as concerned about improving their grassland as they are about improving their livestock herds. Meet three of them:





"I have decided that we are in the business of raising grass. I no longer consider myself a cattle person. I'm now a grass person."

## Georgia Lee Swickheimer

Georgia Lee Swickheimer and her brother operate a ranch in Goliad County that has been in their family since before the turn of the century. They run a cross-bred cattle operation and are embarking on a long-term grassland improvement project.

"I have decided that we are in the business of raising grass," Swickheimer said. "I no longer consider myself a cattle person. I'm now a grass person."

With Soil Conservation Service assistance, the Swickheimers plan to install a cell grazing system that will divide their ranch into at least five cells within 5 years. They plan to use mostly electric fences with fiberglass posts. The fences will radiate outward from a central water supply to be developed for each cell.

"Right now, water is our limiting factor in getting started with the cells," she said. "We think we have a good water well ready to tap this month, but we will have to pipe the water to the center of the cell. Part of the fences are in, so if the water well works, our first cell should be operational this year."

"We hope to have the cell divided into eight paddocks, each of which will be about 270 acres in size. Our plan is to put cattle in one herd in one paddock, then rotate them to fresh forage every 4 to 11 days, depending on conditions."

Ideally, they would like to complete each cycle in 60 days during the growing season. Leroy J. Mikeska, district conservationist for SCS in Goliad, said cattle will graze an area an average of 8 days, then the area will be rested about 52 days.

"When continued yearlong, each cycle will be completed about six times per year," Mikeska said. "After 12 months, each pasture will have been grazed 50 to 60 days and rested about 300 days, depending on the number of days between moves."

"These rest periods will allow our grasses to gain vigor, and develop deep root systems," Swickheimer said. "In our deep soils, we need deep roots to go to moisture during dry spells."

"If you graze grass continuously with no rest periods, the roots stay close to the



Georgia Lee Swickheimer discusses her plan to install a cell grazing system with Leroy J. Mikeska, district conservationist for the Soil Conservation Service in Goliad, Tex.

surface," she continued. "It's what I call whiplash roots. They look just like fishing line when you whiplash it—a pile of little tangled strings instead of a long, deep line. I think the cell grazing system will allow us to get more uniform use of our forage production to the point that we may eventually be able to double our livestock numbers."

The Swickheimers carry out an elaborate program of crossbreeding Simbra, Brahman, Hereford, and Angus bulls to cows that are from Brahman-Hereford crosses, Brahman-Angus crosses, Angus-Hereford crosses, and Hereford crosses. They also are running a Murray Grey strain of cattle

imported from Australia that are a cross between Shorthorns and Angus. This strain is more often found in the cool North-western States.

Swickheimer is one of two women on the five-member board of directors of the Goliad County Conservation District. She is also president-elect of the Texas Agri-Women (affiliated with American Agricultural Women) and a member of the Professional Women's Group in Victoria. The Texas Agri-Women has more than 300 members and is active in promoting all phases of agriculture in Texas. The Professional Women's Group in Victoria is a group that limits its membership to 50 women who "network on everything that works for the betterment of the community."

“When grazing in a pasture is no longer fun for them, I can see it in their eyes and they look toward me bawling. That’s when I know it is time to open the gate and move them to another pasture.”

## Robert Love

Robert Love, of DeWitt County, has learned when it’s time to move cattle by looking and listening. He rotates a herd of twenty-odd cows and calves through five pastures on 68 acres. That way, he gets maximum grazing efficiency from the unit.

Although Love has a full-time job in addition to his ranching interests, he tries to see the cattle nearly every day. “When grazing in a pasture is no longer fun for them, I can see it in their eyes and they look toward me bawling,” he said. “That’s when I know it is time to open the gate and move them to another pasture.”

“It is unreal how they enjoy moving to fresh pastures,” Love continued. “They kick up their heels and run and jump as if they were having a party.”

Love and his brother also lease three other tracts totaling 143 acres. “We don’t rotate the cattle on the leased pastures as we do on the tract we own,” Love said. “We keep older cattle that we have tamed under our grazing system on that land. They are so gentle that we know they are not going anywhere.

“We do, however, move cattle back and forth between the leased land and the 68-acre tract to try to keep some balance between livestock and forage. We can’t drive our cattle. They are too gentle. But they will follow us anywhere.”

Love’s cattle are a Hereford-Jersey cross that were bred to a Brahman bull. The bull is so gentle that Love can make him lie down in the pasture by petting and rubbing him.

Love is a cooperator with the DeWitt Soil and Water Conservation District and is also



Robert Love keeps a herd of Hereford-Jersey cattle that are bred to this Brahman bull. The bull is so gentle that Love can make him lie down by petting and rubbing him.

a member of The Earth Team, volunteers who do conservation work for SCS. Love has been volunteering about 15 hours a month to help Donald R. Shaw, SCS district conservationist in Cuero, conduct conservation tours and assemble a list of landowners who are absentee or inactive in applying conservation work. He enjoys his volunteer work, he said, because he would like to see other people improve their land as he and his brother have done.

“Love knows everybody in three counties,” Shaw said. “He is invaluable in

helping us reach people who need to know how they can improve their land through conservation work.”

When Love is not working at his job in town, volunteering, tending to the cattle, or planting grass, he carries out an almost continuous battle against brushy plants such as McCartney rose, huisache, and mesquite brush. His seven sons and two daughters help.

“We try to carry out some kind of brush management project every year.”

## Felice Gonzales

Shortly before Felice Gonzales' father died, he told Felice and her two sisters to lease out the family's two ranches. That was in 1941, and Felice has been managing the family's ranching enterprise ever since.

The estate that Felice and her two sisters inherited in Victoria County, Texas, dates back to the 1770's when an ancestor received part of the ranch near the community of Nursery as a Spanish land grant. Their grandfather later added to the original ranch, then bought another ranch near Fordtran.

“Our father told us to lease the two ranches out to someone just before he died,” Gonzales said. “He also told our banker and our lawyer that he wanted us to lease the ranches. But after he died, I said, ‘No, give me 5 years.’ Then after 5 years, I said, ‘Give me 5 more years.’ And here I am 47 years later, still going strong. I go out there almost every day to see about the cattle or to look after something.”

Gonzales raises Hereford-Brahman cows that are bred to Simmental bulls. With technical assistance from the Soil Conservation Service, she has installed a variety of grazing systems, including one in which one herd of livestock is rotated through four pastures on a regular basis. She is getting ready to divide one large pasture into two smaller ones for a one-herd, two-pasture system.

“Grazing and resting rangeland in a planned sequence allows the better grasses a chance to regain vigor and develop deeper root systems,” explained Ronnie Boston, SCS district conservationist in Victoria. “It is an excellent way to help improve rangeland and it allows livestock producers to gain maximum grazing efficiency from their grassland.”

Gonzales has a constant brush problem caused by the encroachment of mesquite, huisache, yaupon, hackberry, and shrubby live oak. “We try to carry out some kind of brush management project every year,” she said.



Felice Gonzales has been managing her family's ranching enterprise for 47 years. Part of a ranch near Nursery, Tex., has been in her family since the 1770's, when an ancestor received it in a Spanish land grant.

Last year, she bulldozed yaupon and hackberry out of a bottomland pasture, leaving large pecan trees. When the brush is thinned, it allows sunlight to reach the grass, stimulating forage production. After a few years, the brush thickens back up and the process has to be repeated.

In 1983, Gonzales aerielly sprayed about 200 acres of oak with herbicide. This year about 75 acres of huisache was treated with diesel oil.

She has a Gordo bluestem meadow that she fertilizes and harvests as hay. She also harvests a Johnsongrass meadow for hay each year.

Gonzales is a cooperator with the Victoria Soil and Water Conservation District, and has been on the board of directors of the district since 1976. She was reelected last year to her third 5-year term. She is also secretary-treasurer of the board. She has held a similar position with the Gulf Coast Association of Conservation Districts

**Dale D. Allen,**  
public affairs specialist, SCS, Temple, Tex.

# A Ranch Plan For All Users

**E**very day starts before daybreak for Bob Barton on the Diamond A Ranch. With cattle to watch, hay to cut, and 147,000 acres to manage, there's not much time for sleep.

Barton lives in Elko County, Nev., near the Idaho border. The third largest county in the continental United States, Elko County has 11 million acres but only 23,000 people, or about 1 person for every 500 acres. The nearest town, Twin Falls, Idaho, is 85 miles away, down a road that is dirt 9 miles of the way. Other family members live in Twin Falls so the children can attend school, but spend summers on the ranch.

Because the Diamond A is so remote, Barton has to be an innovator and a good manager, in other words, a jack-of-all-trades, just to survive—let alone succeed. A good management plan is essential.

Cattle from the Diamond A graze both private and public lands. As a cooperater with the Owyhee Conservation District, Barton has developed and is implementing a conservation management plan for his 14,000 acres of privately owned land. He also participates in a three-pasture grazing

system on 16,000 acres of rangeland administered by the Forest Service of the U.S. Department of Agriculture (USDA). And to tie his entire operation together under one complete, efficient management system, Barton recently developed a Coordinated Resource Management Plan (CRMP) for the ranch that includes the management of his 108,000-acre allotment of public grazing land from the Bureau of Land Management (BLM).

Even though Elko County is remote and sparsely populated, other people use the BLM land for hunting, fishing, and other activities. Barton requested the CRMP through the Elko County CRMP Committee so that the management plan would be agreeable to all land users.

The CRMP committee approved Barton's request and appointed a technical planning committee of representatives from USDA's Soil Conservation Service, Forest Service, and Cooperative Extension Service; the BLM; and the Nevada Department of

Wildlife. Idaho Department of State Lands and Division of Wildlife officials were also involved because part of the ranch extends into Idaho.

Under Barton's leadership as chairman of the technical planning committee, an initial meeting was held to develop goals and objectives. A variety of needs and problems were discussed, including livestock grazing; wildlife habitat needs for antelope, chukar, sage grouse, bighorn sheep, and deer; an elk transplant proposal by the Nevada Department of Wildlife; riparian areas; archaeological sites; a proposed wilderness study area; and a wild and scenic river area. "We needed a miracle to resolve all of this," said Barton.

The SCS field office in Elko and the Boise, Idaho, BLM District Office developed a preplanning resource inventory. Once the inventory was completed, meetings were held at the ranch every few months for a year and a half. "We didn't walk away from an issue until everyone agreed," said Barton, emphasizing that CRMP decisionmaking is based on consensus. A draft plan was developed and revised numerous times before all of the parties were satisfied.

## Manage Better, Produce More

**"Y**es, we've still got plenty of grass," the ranch manager said "but I just wanted you to come down and see what you thought about changing pastures. We've been on the Winters' pasture since mid-June, and we haven't grazed the Coal Bank pasture since last fall."

Steve Smith, ranch manager for the Decker Coal Company 7-D Ranch, told me this as we crossed the Tongue River Dam and headed toward the rangeland fields. Steve and I had ridden through the fields many times since 1979, discussing grass production and what might be done to increase it.

"Since the fall rains started, our Western wheatgrass added about 5 inches of regrowth," said Smith. "I sure don't want to hurt it by staying in the pasture too long."

Balancing livestock numbers with the available forage was the goal Smith had in mind when he asked the Soil Conservation Service to help him prepare a conservation plan for the 7-D Ranch in 1979. Planning began with a soil map and an inventory of the rangeland condition based on what vegetation the soil and climate would support. The location of fences, existing stockwater, and grazing hazards was also recorded. From the inventory, it was easy to see where grazing pressure was high, about right, and low.

Using this information and SCS recommendations, Smith decided on the changes he would make to adjust the grazing pressure. His main objective was to allow long enough periods of rest for each pasture to keep the vegetation healthy and productive.

Big sagebrush was a problem, but Smith wanted to ensure minimal adverse effects to wildlife from spraying herbicides to control sagebrush. To help him, a team made up of Stephen Knapp, a biologist with the Montana Department of Fish, Wildlife and Parks; Ron Batchelor, an SCS biologist; and Dave Doty, an SCS range conservationist, reviewed the proposal. Since that review, Smith has sprayed sagebrush on 3,500 acres. Moisture once used by sagebrush is now being used by more desirable plants.

"The most positive item from the whole process was that so many people with their own interests could get together and, with a little give and take, make decisions that would benefit everyone," said Barton, "and take care of the land."

The committee agreed on using controlled burns to reduce sagebrush competition and increase forage for livestock, antelope, and deer. Watering areas will be developed away from the Bruneau Canyon rim so that livestock will not interfere with the bighorn sheep habitat. Fencing will be constructed to implement a grazing system that will take into account wildlife needs along with livestock forage. Barton agreed to inventory sage grouse strutting grounds as he worked the ranch, since the State wildlife agencies have little data available for the area. And so it went until the plan was completely developed and approved in 1984 by all of the participants.

The steps followed by the group were typical of the CRMP process:

- The group is organized and the planning area defined. The area usually covers a mixture of private and public lands, including rangeland administered by the BLM. Any interested organization or individual can be represented at the meetings.
- The group defines the resource issues, problems, and opportunities. The concerns and objectives of all participants are clearly recognized and planning begins.
- Management plans are forged in an on-the-ground process of compromise and consensus.
- Plans are implemented and monitored on a periodic basis and, if necessary, reevaluated and revised.

"Because of the CRMP process, the ranch has a new stability that was lacking in the past when management goals changed as regularly as the agency personnel," said Barton. "It sure makes my work a whole lot easier."

**Leland Campsey,**  
district conservationist, SCS, Elko, Nev.

---

Fencing was also part of Smith's plan. One cow in a big pasture will graze exactly where you don't want her to—along a creek bottom or around a waterhole. She must be fenced out periodically so all parts of the pasture can receive a rest from grazing. During the summer of 1980, Smith added 6½ miles of fence, creating seven pastures instead of three.

Water is essential to making a rotation grazing system work; each pasture must have water available in every season. During the summer of 1981, Ken Peterson, SCS engineering technician, helped design three springs and 4,200 feet of pipeline for

stockwater on the ranch. Smith hired a contractor to do the installation, which was completed that fall. Since then, other pipelines and tanks have been placed in strategic locations within the pastures.

One water system uses a well saddle of a hill. A windmill pumps water into a 7,000-gallon storage tank. The water flows from the tank through 2,180 feet of pipeline, providing stockwater to three pastures.

The Big Horn Conservation District named the Decker Coal Company its "Outstanding Cooperator" in 1982, and the company continues to follow its outstanding rangeland conservation program today.

**Wayne Nipple,**  
district conservationist, SCS, Hardin, Mont.

---

Colorado's fourth graders are reading all about grasslands in a recent issue of the *Colorado Reader*, an 8-page publication that contains feature stories about grasses and rangelands.

"All About Grasslands" was produced by the Colorado Department of Agriculture, the Colorado Society for Range Management, and the Colorado Association of Soil Conservation Districts. The project was headed by the Colorado Agriculture in the Classroom Task Force in cooperation with other agencies. The Soil Conservation Service assisted with developing the publication and contributed to funding of the project.

The reader was prepared for use by Colorado elementary school teachers and as an information tool for the U.S. Department of Agriculture's Forest Service, the U.S. Department of the Interior's Bureau of Land Management, soil conservation districts, SCS, and other interested organizations.

The reader discusses what grasslands are, what grasses do, and how to protect grasslands. Different sections cover grasses for conservation, food, and beauty; how grasses grow; and Colorado's grasslands in particular.

The skills section of the reader, on the last page, serves as a review sheet. It contains a word search and a crossword puzzle that reinforce key terms.

The teacher's guide compliments the reader and gives additional information on grasslands and rangelands. It also lists supplemental publications, vocabulary words, discussion questions, and a list of groups to contact for more information.

The reader comes out six times a school year and discusses various agricultural topics. For more information contact Helen Davis, Colorado Department of Agriculture, 1525 Sherman, Denver, CO 80203.

---

Moving? \*

Send present mailing label and  
new address including zip code to:

U.S. Department of Agriculture  
Soil Conservation Service  
P.O. Box 2890, Room 6202-S  
Washington, D.C. 20013-2890

Official Business  
Penalty for private use, \$300

THIRD-CLASS BULK RATE  
POSTAGE AND FEES PAID  
USDA-SCS  
WASHINGTON DC  
PERMIT NO G-267

# Our land. Our water. Our heritage. Let's keep 'em productive and pure.

A message from the  
Association of Texas Soil &  
Water Conservation Districts

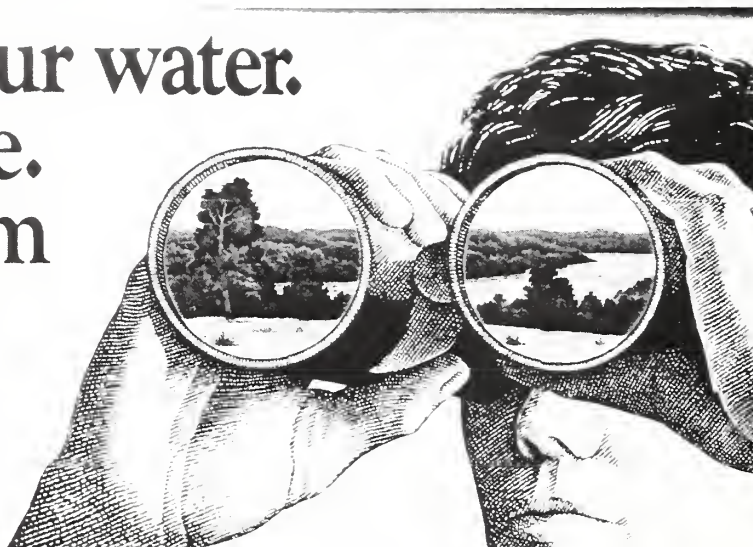


Photo by Dale Allen, public  
affairs specialist, SCS,  
Temple, Tex.

Helping to celebrate the 150th anniversary of the independence of Texas last year, the association of Texas Soil and Water Conservation Districts placed a conservation message on billboards around 17 major cities in the State. Several supermarket chains printed the same message on grocery bags.

## A Winning Way

**C**ontrolled grazing has revolutionized the way Gene and Marcy Goven of Turtle Lake, N. Dak., manage their rangeland and crop aftermath grazing.

Their old season-long system resulted in poor grazing distribution and produced areas of overutilization, declining plant vigor, and eroding trails. Brush was increasing, and some desirable forage species had become practically nonexistent. Livestock production was decreasing. This all began to change in 1982 when the Govens installed their first cross fence and initiated a rotation-deferred

grazing system. Since that time, additional fences have been added and the Govens now rotate their grazing on 14 separate pastures.

The Govens, who carefully watch their plant and livestock needs, have noticed many changes. Grasses such as big bluestem, little bluestem, prairie sandreed, and western wheatgrass are increasing. Western snowberry, Kentucky bluegrass, and annuals have decreased. And they have found that the stubble left after barley harvest can provide additional grazing for 7 to 10 days and still leave enough litter for soil protection.

As a result of all the changes, the Govens have been able to gradually increase the size of their herd from 60 in 1982 to 110 in 1986, for a total increase in beef production of 21,960 pounds.

The Govens now host numerous tours of their ranch each year for groups who want to see for themselves what controlled grazing can do. They also get an average of 3 to 4

phone inquiries per week. They point out that their achievements with controlled grazing have been made over the past 4 years while rainfall has been 50 percent below normal and say they hope for more success when rainfall returns to normal.

In 1984, the Govens won their county Conservation Achievement Program Award presented by the North Dakota Association of Soil Conservation Districts. In 1986, the North Dakota Society for Range Management recognized Gene Goven as the North Dakota Range Manager of the Year.

**Ariene Deutscher,**  
visual information specialist, SCS, Bismarck, N. Dak.

**Herbert Mittelstedt,**  
RC&D coordinator, SCS, Mandan, N. Dak.