



# Stewardship

Providing Leadership for the stewardship of rangelands based on sound ecological principles

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Photo by Jim Thorpe

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*Stewardship* welcomes the sponsorship of *Out on the Land*, RFD TV's show highlighting conservation and sound stewardship practices! Dr. Larry Butler created the show to tell the story of what is happening.....*Out on the Land*..... Check your local listings for RFD channel information and watch *Out on the Land* Tuesdays on RFD-TV, 7pm Eastern, 6pm Central, 5pm Mountain, and 4pm Pacific. Past episodes can also be seen at [www.outontheland.com/category/episodes](http://www.outontheland.com/category/episodes). Contact Larry if you have an idea for a show feature at [www.outontheland.com](http://www.outontheland.com).

*Stewardship* will give authors of articles specially designed caps or t-shirts.....sponsored by *Out on the Land*. The only way to get one is to write, so get out your pencils and submit your stewardship story to SRM's newest publication, *Stewardship*. Your story will reach audiences well beyond SRM, from city folks and rangeland enthusiasts to our own brethren with each issue. Join in the fun and you'll be wearing a smart new cap or t-shirt!

Jenny Pluhar, SRM Vice President

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## Introduction

We are pleased to present our 2<sup>nd</sup> issue of Stewardship. We now have a sponsor and a bevy of exciting articles. Pass the word to your friends and neighbors about the publication. With the rapid pace of work coming up for this next year, it is easy to just delete the notice of the publication. I would like every member of SRM to see the next publication and send me an e-mail, pro or con. The next issue will be in February 2014. If you have a short topic you want to talk about, let us know.

Sincerely,  
Gary Frasier, Editor  
[stewardship@rangelands.org](mailto:stewardship@rangelands.org)

*Photos by Gary Kramer, courtesy of USDA  
Natural Resources Conservation Service*

**Top:** Deer utilize rangelands in North  
Central Montana.

**Bottom:** Lesser prairie chicken in Eastern  
New Mexico.



## When Conservation Practice Isn't

Driving the rural roadways, I often see new fencing or water developments in the pastures of farms and ranches. I wonder, “are these conservation practices?” Although they may appear to be conservation practices, they don't necessarily provide conservation benefits to the landscape; in fact, they may lead to resource degradation. How can that be?

Conservation practices planned and applied on grazing lands are grouped into three categories to reflect their major purposes:

1. ***Vegetation management practices*** are directly concerned with vegetation use and growth. An example is prescribed grazing to balance forage supply with animal demand. Flexible scheduling and daily management decisions to achieve the desired objectives are the most important conservation activities that can be applied to grazing lands in any portion of the world.
2. ***Accelerating practices*** supplement vegetation management practices. They help to achieve desired changes in the plant community more rapidly than is possible through vegetation management with the grazing animal alone. An example is brush management.
3. ***Facilitating practices*** control or influence the movement and handling of grazing animals and facilitate the application of the vegetation management practices. Examples include fences and water development.

A conservation practice is not a conservation practice when it is improperly prescribed, planned, and/or applied. We all know that a medical prescription has little chance of accomplishing our health goals unless the problem was properly diagnosed, the prescription is right for the problem, and it is taken in the right measure, in the right sequence at the right times. A conservation practice to improve and/or maintain healthy ecosystems must also fit this general description.

A fence is designed to facilitate vegetation management. If the management is good, then the fence does its job to facilitate the land manager's actions to apply good management. If the management is poor, then the fence facilitated the land manager's actions to apply poor management. A fence built across a poorly managed pasture, without a change in management, does nothing but make two poorly managed pastures out of the same acreage. The fence does not influence the management; it merely influences the livestock's movement or lack of it. Water developments serve in a similar manner.

So, is a fence or water development the right practice(s) to apply? When should they be applied? How much or many should be installed? These questions can only be answered in a general sense here, but must be answered



Photo by Gary Frasier

in specific terms on a specific farm or ranch. In all cases, conservation practices on grazing lands must be planned and applied in harmony with each other in a manner that meets the landowner's objectives and accomplishes the conservation objectives.

Before a fence or water development can be a conservation practice on a particular property, grazing management principles have to be understood and applied. The land manager must know the plants and animals and understand the interactions that occur between them. Additionally, management decisions, weather, and other factors can impact the resource. If this isn't happening, then the fence or water development is merely a capital improvement and not a facilitating conservation practice.

If you are a rangeland management specialists or pasture management specialist who provides assistance to a farmer or rancher with grazing lands by planning fences, water developments or other practices? If so, are you spending an adequate amount of time assisting them with balancing their forage supply with their animal numbers? Are you helping them to understand how plants grow and how these plants may or may not meet their livestock's nutritional requirements? Are you helping them to understand how the many conservation benefits can be realized with proper management of the plant communities? Are you assisting them with the identification of the real problems or merely addressing the symptoms? If your answer is not yes to each of these questions, then you may be assisting with the application of conservation practices that aren't!

### **Larry D. Butler, PhD**

Executive Producer & Host of Out On The Land Series on RFD-TV

Range & Wildlife Consultant

(NRCS, State Conservationist, TX, retired)

*Note: Original version written by author when he served as Director of the NRCS Grazing Lands Technology Institute, July, 2000.*

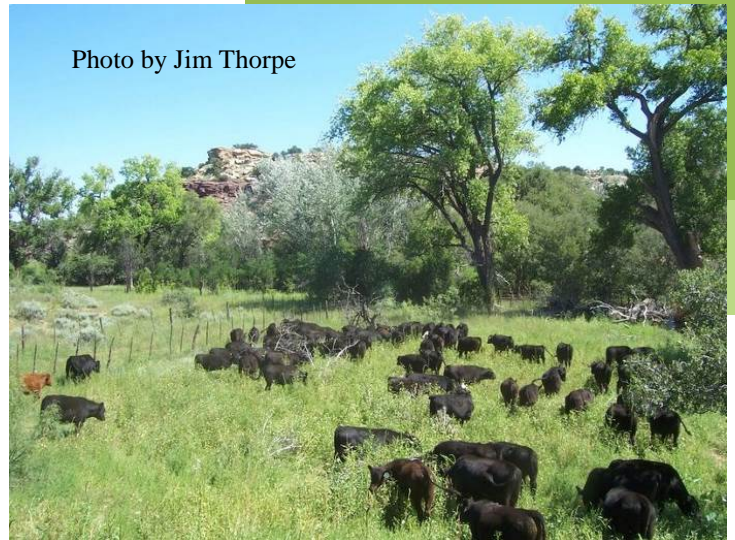


Photo by Jim Thorpe

## Ranchers Need to Manage Pastures in Fall

*Pastures and rangeland in many areas may still be stressed from last year's drought, making good management practices even more important.*

DAVENPORT, Neb. (DTN)—Although most Midwestern states have received more rainfall this year, the effects of last year's drought are still being felt on many pastures and rangeland areas. Those lingering effects from drought make good management practices even more vital, according to Karla Jenkins, assistant professor

*The content and information of each piece is solely a reflection of the author and is in no way an official position for the Society for Range Management.*

and cow/calf range specialist at the University of Nebraska Panhandle Research and Extension Center in Scottsbluff, Neb. “Drought has long-lasting effects,” Jenkins said. “It is just as important to manage rangeland in the year before and after a drought as the year during the drought.”

While farmers and ranchers cannot prevent natural disasters such as drought, hail or insect damage from happening, they can prepare rangeland and pastures as much as possible for when such events do occur.

### **RANGELAND MANAGEMENT**

Jenkins listed some advice for ranchers in managing their native rangelands, especially as winter approaches.

#### **--Don't Overgraze**

In good years, be careful not to overgraze so plants have a chance to re-grow, Jenkins said. If plants have already been stressed by drought, it's better if they are not stressed in the year following the drought.

Some ranchers get in too much of a hurry to use pastures again and stock pastures heavier than they should, and don't give grass a change to recover from being stressed. She compared that to a runner who could run a marathon well if he has been healthy, eating right and has trained well,

versus a runner trying to compete two days after having the flu. “You cannot expect the same performance from rangeland a year after being severely stressed, even if you get good rainfall, because the root depth is not as strong and the ability to grow is not as good,” she said.

#### **--Inspect Pastures**

Jenkins said the best management tool is to watch stock numbers and pull some out when needed. She stressed that nothing

can take the place of going out and walking through your pastures and monitoring the condition of rangeland, in order to make good management decisions.



Photo by Jim Thorpe

**--Supplemental Feeding**

Jenkins said supplemental feeding can be a good tool to reduce cattle intake of range plants. By mixing dried distillers grains and low-quality hay, she has achieved about a 17% reduction in use of pasture. However, she stressed that you have to mix forage with the DDG.

“If you just go out and feed a couple of pounds of protein, you increase the digestibility of the grass and intake increases,” she said.

**--Conservation**

After grass has passed the growing season, don't graze down to the ground. Leave some litter or dead plant material to slow water run-off and give dry soil a better chance of absorbing rain. Likewise, if a little bit of the plant is standing, there is a better chance of capturing melted snow. Leaving litter also helps combat wind erosion in sandy soil like Nebraska's Sandhills.

“We go with a take-half, leave-half mentality,” Jenkins said. “Leave half the plants for livestock and for insect or trampling loss. Then leave the other half for the plants themselves to generate and grow from.”

**--Fall and Winter Grazing**

For fall, Jenkins recommends placing cattle on cornstalks as soon as harvest is over, until the first part of the year or until the fields run out. She suggested using native pastures and supplemental feeding once winter weather is possible, since native pastures often have hills or rocky outcroppings that serve as shelter for cattle. Since supplemental feeding is fairly about intensive, Jenkins suggested finding low, easily-accessible ground to put feed on.

During winter, she also suggested letting cattle graze pastures deferred during the growing season and supplementing protein cubes maybe three times a week to help cattle digest grass.

**--Planted/Irrigated Pastures**

Good Management practices are also vital for pastures planted with grasses such as smooth brome, intermediate wheat grass, or timothy grass, as well as pastures irrigated for forage such as alfalfa, according to Jerry Volesky, Professor and Range and Forage Systems Specialist at the University of Nebraska's West Central Research and Extension Center at North Platte, Neb.

**--Moderate Grazing**

Volesky stressed how important it is to control grazing in the fall, for pastures with cool season grasses such as brome or timothy grass etc. Moderate grazing in October and into early November is acceptable, as long as ranchers are careful to leave a bit of residual grass and not graze plants down to the ground, he said.

“We've seen that leaving a stubble height of about 4 inches to 6 inches on irrigated grasses helps get them through winter,” he said. “that helps capture snow so it does not blow off.” Supplementing pastures with hay or other feed can lighten up grazing pressure, but it must be good-quality hay.

**--Winterize**

Volesky also stressed the importance of allowing alfalfa to winterize. Winterizing typically occurs between early September and mid-October, although the timing of that period is different every year, such as this year when the growing season is running late.

Winterizing involves letting hay rest for 30 to 40 days before taking the last cutting. This is especially important for alfalfa, which has a heavy root system, so the plant can send energy reserve to the root system in preparation for winter. If alfalfa is given a proper winterizing period, farmers can still take a normal cutting from the field, he said.

**--Weed Control**

“Weeds have been problematic this year, especially in smooth brome pastures,” Volesky said. “Last year’s drought thinned out grasses, leaving them too weak to compete with weeds.”

Most weeds that flourished were annual weeds that started from seed, though most are now done growing for the season. However, some control measures may be needed if farmers see a high number of perennial weeds. “Fall spraying of some noxious weeds like thistles have been shown to be very effective,” he said. “The next month or so is a good time to take care of spraying perennial weeds.”

**--Re-seeding**

Producers may want to re-seed pastures that have been greatly thinned out in order to improve them. However, it is getting a bit late for pastures such as brome grass, which are often re-seeded around mid-September. Such pastures are better re-seeded in the spring when there is a likelihood of more consistent rainfall, Volesky said. He also stressed that with renovation of brome pastures, it is a good idea to add some legumes, such as clover or alfalfa, to improve the overall quality of the pasture. Again, that is something best done in the spring. Fortunately, pastures in areas such as central and eastern Nebraska have recovered some moisture since last year’s drought and have started to recover fairly well, he said.

“There are still some grazing opportunities; however, managing those pastures well through the fall months will be important for next spring’s growth and production,” he said.

**By Cheryl Anderson**

*DTN Staff Reporter*

*Source: DTN, Posted by Northern Ag Network, Cheryl Anderson can be reached at [cheryl.anderson@telventdn.com](mailto:cheryl.anderson@telventdn.com)  
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## Introducing the V Bar V Range Program

The Encyclopedia Britannica defines range or rangeland as “any extensive area of land that is occupied by native herbaceous or shrubby vegetation which is grazed by domestic or wild herbivores.” A simple statement but one packed with a lot of information if you think about it. At the University of Arizona’s 71,000 acre V Bar

V Ranch, it is our job to think about it, rangeland that is. And to not just think about it but to study, manage, and educate others about rangeland as well. As scientists and educators working in the field of rangeland ecology and management, we are fortunate to have the V Bar V as our laboratory and classroom and we want to share that good fortune with you.

This experiment station is unique among university research ranches because we are a public land ranch. The V Bar V operates on the Walker Basin allotment within the Coconino National Forest in central Arizona. The ranch is thus a valuable resource for those grazing or managing for other multiple uses on federal, state, or tribal lands in Arizona and across the Southwest. Three major climate/ecosystems exist on the ranch; desert shrub, piñon-juniper, and ponderosa pine. Forage species include warm and cool season perennial and annual grasses, forbs, and shrubs. A single herd (300 to 550 cows) grazes upward in elevation from desert shrub in winter, to piñon-juniper in spring/summer, pine in summer/fall and then downward from pine back through piñon-juniper to desert shrub in late fall/winter each year. Extensive land... native vegetation... domestic and wild herbivores... The University of Arizona... do we have your attention yet? Well then, take a few minutes to look around, you just might learn something. The University of Arizona College of Agriculture and Life Sciences (UA CALS) acquired the V Bar V Ranch in January, 1995 on a gift/purchase agreement from Ben and Betsy Zink. The acquisition was made possible through the use of private funds provided by the college's supporters and the UA Foundation.

Transecting the Mogollon Rim, the grazing allotment runs about thirty miles east from Camp Verde, AZ and varies between four and five miles in width. Forty-four acres is private land, with the remainder held under lease from the U.S. Forest Service. With elevations ranging from 3,200 to 7,000 feet, the ranch allows the UA CALS to expand its experiment station network to include higher elevation ecosystems.

In addition to cattle, the ranch is also habitat for a wide variety of wildlife, ranging from mammals, birds and fish to reptiles and amphibians. The vegetation zones are typical of those on most of the commercial ranches in central and northern Arizona.



Photo by Dave Schafer

The V Bar V is a fully operating, working ranch so the research performed there involves an applied approach to problem-solving rather than laboratory studies in basic science. Faculty, staff, and students operate the ranch and conduct research in various disciplines of agriculture including, but not limited to, animal and plant science,



veterinary science, renewable natural resources, agricultural economics, soil and water science, and agricultural engineering.

Visitors are always welcome so if you find yourself in central Arizona feel free to stop in and say hello.

### By Dave Schafer

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## More on Sustainable and Sustainability

### Sustain [*vt*], Sustainable [*adj*], Sustainability [*n*] and Sustainably [*adv*]

The word *sustainable* conjures images of an oblong blur. In the vernacular it seems to mean anything from “good enough is excellent” to “utopia.” What does it mean when “able” is added to sustain [*vt*]? It means the root word is possible, but never with absolute certainty. The suffix “able” connotes capable of rendering some end, e.g., supporting, holding, bearing, maintaining, transferring, completing, sustaining. But, you can never know. Over 1400 root words in the English language end in “able.” Words like probable, sustainable, workable, enforceable, or renewable are adjectives. Examples might include a probable cause, or enforceable rule, or workable solution, or renewable resource, or a sustainable practice. When “ility” is exchanged for “able” it simply means the property of being. So, sustainability [*n*] is the property of being sustainable or sustained.

The word sustainability is not in all dictionaries. The idea of sustainability is illusive and can’t be defined. At best, cultures can agree on things and values they want to perpetuate into the future. But, in a chaotic and uncertain world there is no guarantee perpetuation is possible. We can never know. We can never know if a practice can be sustainably [*adv*] applied. We can declare this is a sustainable practice; or, this practice is sustainable. Yet, uncertainty remains.

To me, you can’t talk about sustainability or a sustainable practice until you answer the question, “how can I know?” So, why bother? We can answer that question once we decide the motivation to know. We know how to manage transitions because science helps inform the way the system is organized *at the level of the issue*. As a result, we can apply practices that modify the system processes that control the desired outcome. We use knowledge of system relationships and feedbacks to nudge the system in the direction we want it to go. It’s called process-based adaptive management.

The degree of process modification depends on the frequency, intensity, duration and extent of application. We only need to know initial conditions, predict the system response to the practice (based on some way of knowing), and decide how long to let the system run before taking another measure (the new initial state) to manage adaptively. At that point you can retain or change the practice, and move on. As long as the attribute of value moves toward, or remains within a range of variability, we can say it is *sustained* – but, only for now. It’s a relay. Don’t drop the baton.

**Larry R Rittenhouse** -*Professor Emeritus, Colorado State University*

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