Volume 5, Number 5
Sep-Nov 2000

A voluntary partnership with private landowners

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A prescribed burn in Yolo County, California. Photo provided by Jeanne Wirka of the Audubon Society. Wirka works closely with NRCS doing innovative burns to control noxious weeds.

Prescribed Fire to Control Noxious Weeds and Improve Forage Quality

By Wade Anderson, Range Conservationist, NRCS, Red Bluff, CA

Medusahead and Yellow starthistle are two species of noxious weeds that are causing some big problems for ranchers and landowners in the Sacramento Valley and foothills of Northern California. They tend to invade rangelands and lower their productivity for livestock, as well as crowd out native grasses and wildflowers. However, properly timed burning seems to control the spread of these weeds (especially medusahead). The Nature Conservancy (TNC) and the California Department of Forestry and Fire Protection use prescribed burning to combat these invasive weeds. Every year on the Vina Plains Preserve near Chico, California, one pasture is burned as part of this program.

"We know that fire helps control these noxious weeds, but what does it do to forage quality and how long can we expect a change in quality to last?" asks District Conservationist Larry Branham from the Natural Resources Conservation Service (NRCS) Red Bluff Field Office. NRCS, TNC, and two local ranchers are working together on a three-year study designed to document and compare the forage quality of annual rangelands before and after burning to control noxious weeds. The ranchers, NRCS, TNC, and the State Fire Agency are working cooperatively toward common goals.

The study is being conducted on two ranches in Eastern Tehama County, located at the northern end of California's Sacramento Valley and in the western foothills of the Sierra Nevada mountain range. The Vina Plains Preserve is owned by the Nature Conservancy and leased to local rancher Darrel Wood for grazing. The other ranch is owned by Denny

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Prescribed Fire to Control Noxious Weeds

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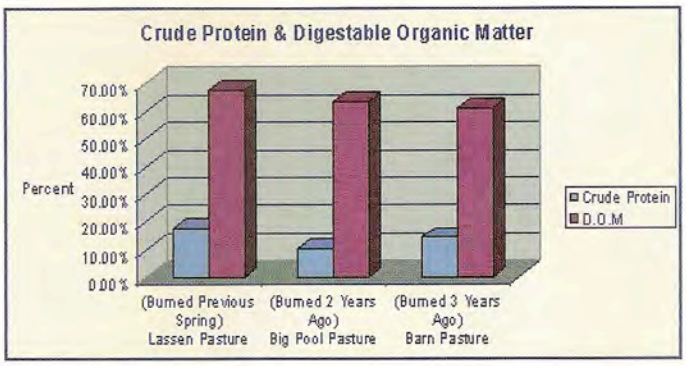
Land & Cattle and operated by Dusty deBraga. This project is designed to measure the effects of prescribed fire on forage quality and noxious weed control over a three-year period.

How will the forage quality be measured? With new and innovative technology developed by Texas A&M University's Grazing Animal Nutrition (GAN) Lab in partnership with NRCS. Fecal samples are gathered and sent to the GAN Lab where they are analyzed using a process known as Near Infrared Reflectance Spectroscopy (NIRS). Results come back with Crude Protein, Digestible Organic Matter, % Nitrogen, and % Phosphorus. This data along with range and livestock data can then be entered into the (Nutritional Balance Analyzer) NUTBAL computer program. The program estimates animal performance quantified in pounds of gain or loss per day. Vegetation composition measurements are also taken pre- and post-burn.

This study will help promote the wise use of prescribed fire as a management tool to control noxious weeds *and* improve rangeland forage quality. The Nature Conservancy's vision is, "To show that grasslands can be managed for both livestock production and endangered species," according to Dr. Rich Reiner from TNC. The Vina Plains Preserve is home to endangered species as well as cattle grazing. It has been shown that a symbiotic relationship can be achieved here. Without cattle grazing, naturalized annual grasses crowd out many of the native wildflowers and endangered species.

The Nature Conservancy's Dr. Rich Reiner and NRCS Range Conservationist Ceci Dale-Cesmat "gather" fecal samples and record information for NUTBAL to calculate forage quality and livestock performance.



Preliminary data looks promising. The most recently burned pastures have the highest quality forage and fewer noxious weeds than older burn sites and non-burned sites. Cattle gains, estimated by NUTBAL, tell us that in the most recently burned pasture (one year ago) cattle gains were the highest followed by the pasture burned two years ago and subsequently the pasture burned three years ago.

GLCI Project Recognized

A GLCI Project was recognized in the first issue of ***Conservation Runner****, the newsletter containing news about Native American activities "from Indian Country in the NRCS's Southeast and South Central Regions." The Oklahoma Grazing Lands Conservation Association recently approved a grant for a demonstration project for the Choctaw Nation in the southeastern part of Oklahoma. The project will evaluate three varieties of bermudagrass for establishment, production, and quality over a two-year period on tribal lands.*

NEW REGIONAL CONSERVATIONIST FOR SOUTH CENTRAL REGION

Humberto Hernandez was recently selected by NRCS Chief Pearlie Reed to serve as the Regional Conservationist for the South Central Region (Arkansas, Louisiana, Oklahoma, and Texas). Humberto is a native of Texas and has worked for NRCS in Texas, California, Puerto Rico, Arizona, and Maryland prior to returning to the NRCS Regional Office in Fort Worth, Texas. Hernandez has a strong technical background and has said he stands ready to support and assist GLCI and grazing lands activities throughout the South Central Region as well as nationally.

Rangeland Monitoring in Northwest Oklahoma

By Trina Curtis

Interesting things were going on in Leedey, Oklahoma, on May 11, 2000. A group of 25 rangeland managers could be found on their hands and knees looking for things such as signs of animal life, analyzing plant litter accumulation, and counting young "recruit" plants. Charley Orchard of Land EKG was the guest speaker for a workshop funded by an Oklahoma Grazing Lands Conservation Association grant. The object of this one-day workshop was to introduce participants to various aspects of rangeland ecosystems and expose them to some of the benefits of rangeland monitoring.

During the day, participants looked at four basic ecological processes. These processes were the mineral cycle, water cycle, plant community, and energy flow. The mineral cycle involves returning minerals from the plant community back to the soil for the future use of plants. This occurs two ways, decomposition of dead plant material and animal manure. The water cycle component refers to the availability of water for plant growth. Although managers cannot influence the amount of rainfall, what happens once the water hits the soil can be influenced by management decisions. Energy flow involves the conversion of sunlight into plants, which are then consumed by animals converting plant energy into protein. The plant community aspect encompasses examining the mix of plant species in a pasture.

Management strategies can influence whether plant succession remains stable or is moving towards a more desirable or undesirable plant community. Good grazing management improves the water and mineral cycling and moves plant succession toward diversity. These improvements lead to an increased energy flow, which leads to a higher level of productivity. On the other hand, poor management leads to a decline in energy flow resulting in lower levels of production.

After looking at the basic ecological processes, Orchard demonstrated how setting up permanent transects and photo points could be used to assess current management practices. First, an area of concern or a representative area is identified. Returning to the same points allows for a consistent measurement of the ecological function, which influences the health and productivity of the pasture. Next, the four basic ecological processes are measured and given a rating ranging from danger to profit zone. The general idea is to measure each process, then prescribe the management tools that will improve the areas in danger or poor condition. The initial measurements will provide a baseline with subsequent measurements revealing what aspects of rangeland health are improving or declining.

Rangeland monitoring helps managers make informed decisions and improve or maintain pasture productivity. Managers are able to capitalize on monitoring information with improved plant vigor, forage production, and more profitable grazing practices. Everyone who attended the workshop gave very positive reviews and left with a lot of food for thought. I think we all left with a better understanding of the four basic ecological practices and why it is important to monitor them. Several people commented on how getting down on their hands and knees and just looking around gave them a whole new perspective on what was happening with pasture health. That's it! Assume the range position (on your hands and knees with nose pointed towards the ground).

REMINDER

National Conference on Grazing Lands

Bally's Hotel and Casino
Las Vegas, Nevada
Dec. 5-8, 2000

Invited Speakers, Voluntary Papers, Poster Sessions

Trade Show and Expo

THE CHAIR'S CORNER

Well, GLCI has had a busy summer and we are expecting an even busier fall. We have just concluded the National GLCI Steering Committee business meeting in Las Vegas, Nevada. In addition, a joint meeting with the National Association of Conservation Districts' Grazinglands and Public Lands Resources Committee was held. I want to personally thank John Frezieres and Robert Toole for all their efforts in making this a very successful joint meeting. Larry Clark, Deputy Chief for Ecological Sciences and Technology, representing Chief Pearlie Reed, made a presentation to the group. Over fifty individuals attended this meeting, taking time out of their own busy schedules to voluntarily work on this conference.

The first order of business was to tour the facilities at Bally's and make crucial decisions on room format and arrangements for the National Conference on Grazing Lands. Every effort is being put forward to make the conference a success and a real value to all who attend. Jack Cutshall and Frank Philp worked extremely hard with their committees to follow through on work assignments and arrangements. I want to personally thank them for their hard work and dedication. Their efforts will ensure that our conference is a success.

The National GLCI Steering Committee dealt with issues concerning our nation's grazing lands. An election of officers was held, and I want to thank the committee for their confidence and for allowing me to serve as chair for another year. Flavius Barker and Pete Jackson were re-elected Vice-Chair and Secretary, respectively. My congratulations to them and to Past-Chair, Aggie Helle, for serving on the executive committee for yet another year.

We unanimously accepted the National Farmers Union to the National GLCI Steering Committee, and are working to bring other partners aboard in support of our national bipartisan message. Again I want to thank everyone for their hard work on the conference and stress the importance of working together. In doing so we can all help to improve the health of our nation's grazinglands.

Bob Drake
Chairman

GLCI News

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