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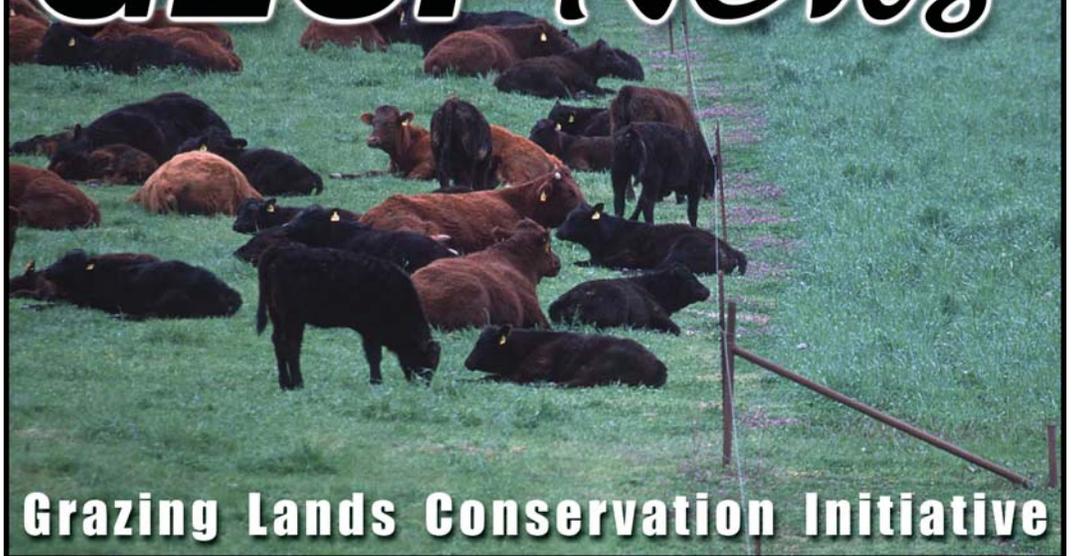
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GLCI News



Praising Rotational Grazing

Livestock producers and range scientists weigh in on the value they've found in rotational grazing.

By: Kindra Gordon

Have a conversation with successful ranchers and rotational grazing will often be mentioned as a key ingredient in their operation's success.

Gene Goven sums up the importance of rotational grazing on his North Dakota ranch this way, "We wouldn't be here if we hadn't changed our method of management."

In 1982, Goven began cross-fencing his 750 acres of native prairie to initiate rotational grazing. Goven describes his range as thin uplands and says with his previous method of continuous grazing, he was able to run an average of 55 cow-calf pairs.

Today, with rotational grazing, Goven reports that on those same 750 acres he has increased his stocking rate 230% and last year custom grazed 138 cow calf pairs during the summer months along with fall grazing an additional 80 pairs. Counting the calves' weight gain alone, Goven says he's averaged a 297% increase in the pounds of beef he's producing per acre.

But, despite the accolades for rotational grazing from producers, research in the range science community documenting rotational grazing system benefits is less clear cut – and sometimes contentious. For instance, a recent synthesis of the science cites studies which suggest continuous grazing can produce equal or better plant and animal production compared to rotational.

While this has divided several range scientists over the issue, South Dakota State University range science professor Pat Johnson acknowledges rotational grazing has two sides. She says, "There are many good things about rotational grazing, but the research [to date] does not support it [improved plant and animal production]."

That said, many – including Johnson, who has devoted more than twenty years to range science research and teaching – say rotational grazing should not be discounted. Instead, ranchers and researchers agree that the value in rotational grazing systems is in the management that goes into them.

Colorado State University Extension range specialist Roy Roath explains this by saying, "The contribution of rotational grazing is the ability to manage rangelands to achieve desired outcomes."

As examples of this, Roath points out how rotational grazing can be beneficial in enhancing plant species composition to achieve conservation goals such as riparian management, wildlife habitat or managed grazing.

Merits of Management

Specifically, Roath says rotational grazing's key principle is to "manage the frequency of defoliation and allow plants the opportunity to regrow and recover during the growing season."

Roath points out that grazing is an intense defoliation process and changing the stocking rate doesn't change the intensity of use – it only changes the number of plants that get grazed. To illustrate this, Roath cites a Texas study in which he compared a rotational and continuous grazing system with the same

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Praising Rotational Grazing *(continued from page 1)*

stocking rate. He reports that in the continuous system cattle grazed 30% of the total surface area with some plants being regrazed 5 to 6 times during the year. In the rotational grazing comparison, more total plants were grazed and plants were regrazed fewer times.

Roath says this is the crux of rotational grazing. He says, "With rotational grazing you change the pattern of grazing use. You don't eliminate selectivity, but you increase use beyond those patch areas – and then allow for recovery."

He makes the point that continuous (or season long) grazing doesn't allow for that recovery and regrowth, and instead permits overgrazed patches and ungrazed patches – even if only a few animals are in the pasture season long.

Roath emphasizes, "If the frequency of defoliation isn't managed and plants aren't allowed a recovery period during the growing season, it will be difficult to maintain the preferred plants in the stand." He further adds that recovery time is critical to foster greater diversity of plant species such as forbs and cool season grasses – which ultimately help in achieving conservation goals.

The importance of recovery time for plants is conceded by others. Karen Launchbaugh, an associate professor in the Rangeland Ecology and Management Department at the University of Idaho admits that she believes there are cases where continuous grazing can work, but says, "...in the topographically challenging landscapes of the West, rotational grazing has an important role. I think that role is more importantly to manage distribution and offer periods of deferment to highly preferred parts of the landscape."

SDSU's Johnson adds, "The great thing about rotational grazing is that you can control when an animal has access to the forage. You can control the amount of use, and with continuous grazing you can't do that."

Speaking to the larger issue of plant diversity, she also says, "If you go in a pasture and graze at the same time every year, eventually you'll change plant communities and possibly the usefulness of that rangeland."

Likewise, Roath says, "In Colorado, continuous grazing [over time] essentially creates a monoculture of warm season, short grasses. You won't have plant diversity and you'll graze out the riparian areas. That's a disclimax. You've decreased the infiltration and you've changed what you produce."

From this, Roath concludes, "In my opinion rotational grazing is supported by the science. The science may not show you can increase productivity because that is limited by soils and precipitation. You can't change that. But, what the land produces can markedly be changed by rotational or continuous grazing systems – You choose."

Additionally, Don Kirby, director of North Dakota State University's School of Natural Resource Sciences, emphasizes that rotational grazing provides an important benefit to wildlife as well – particularly increasing game birds that nest on these grazed lands, such as sharp-tailed grouse and waterfowl. Citing North Dakota research, Kirby says, "We can also produce more game birds from rotationally grazed rangeland. More game birds means more economic possibilities for rangeland operators."

Intangible Effects

As a final point, in addition to the ability to control grazing and impact plant diversity, Johnson also gives credit to rotational grazing systems for several intangible benefits to ranchers. She points out that in a practical ranch setting using rotational grazing, the animals are checked regularly which allows for monitoring herd health and detecting sick calves, injured animals, etc. Johnson says, "Those are some of the biggest benefits that don't get measured in a research study."

Barry Dunn, executive director of the King Ranch Institute for Ranch Management agrees, saying, "The increased attentiveness to the cattle and the grass are benefits from rotational grazing that may not be documented. Most scientific studies of grazing systems are looking at the bare essentials of moving cattle, but there are other things that change – such as fly control, distance traveled to water, water consumed – that are benefits from rotational grazing that don't manifest themselves in forage production or pounds of beef...science doesn't pick up everything."

To that point, Pat Pfiel, who has over 30 years of experience as a ranch manager with her husband Brady in Florida and the southeast,

sums it up this way: "In scientific research rotational grazing is studied as a system, but it's not something you can put on a clock. Rotational grazing is not a system – it's a management tool. You have to refine rotational grazing to each setting and each type of forage...It's an art to watch the cattle grazing and recognize when it's time to move them."



New Measurements

That said, some range scientists are hoping to develop new analysis techniques for the future to better assess the usefulness of rotational grazing systems. Among them is SDSU range science associate professor Alexander "Sandy" Smart, a colleague of Johnson's.

Smart says, "Our discipline [range science] has let us down in not adequately measuring grazing utilization." He cites flaws in current methods to calculate forage production that use caged exclosures, suggesting they are more a reflection of past management than of a current grazing treatment.

Instead, Smart believes a better measure of utilization may be through tracking the harvest efficiency by livestock on rangelands. His belief is that rotational grazing is beneficial because it increases harvest efficiency, and currently, he is re-evaluating previous North Dakota data to examine this theory.

Smart also says plot size is an important factor to be considered in the rotational grazing debate. He says much of the research that makes continuous grazing look favorable in comparison to rotational grazing has been conducted on units smaller than 10 acres. Whereas, on larger, real-life ranch settings, Smart says he's found fencing and setting up rotational grazing is helping distribute livestock over the landscape and utilize the range more efficiently.

He concludes, "Rotational grazing is beneficial – especially when we have differences in plant species and their growth rates. In a rangeland setting where moisture is driving the system, land managers need to be able to control the different time periods to utilize the forage."

"WORLD OF GRAZING" DOCUMENTARY BEING DEVELOPED

A documentary that provides an overview of livestock production on grazing lands worldwide is being developed through efforts by Cody Sheehy and Melvin George at the University of California-Davis. Titled "Out of the Past: A Journey Through the Landscapes of Livestock Production," the creative documentary covers the ecology and cultural aspects of pastoralism, family ranching and industrial livestock production and culminates in a discussion of sustainable land use and the role of family ranches in the future.

George hopes that ultimately the documentary will be available via the internet, DVD, and blu-ray. It is hoped that the movie may be used in public information and education programs about ranching – and possibly even aired on PBS.

To view the initial cut of the film find a link at http://www.autonomyproductions.com/Out_of_thepast/index.htm. Presently the film is at a standstill until funding is secured to narrate the documentary and record it in final form – a cost of approximately \$20,000-\$30,000. Without funding, the film will not be completed.

For more information or to offer funding suggestions, contact Melvin George, Rangeland Management Specialist, UC Cooperative Extension, at 530-752-1720 or mrgeorge@ucdavis.edu.

Producer Perspectives

Overwhelmingly, livestock producers have found favor with rotational grazing in their day-to-day operations. Here's a sampling of their experiences:

Chuck Pritchard operates Bitterwater Land and Cattle Co., a cow-calf ranch east of Paso Robles, California that has been in his family since the 1860s. Today, Pritchard runs about 200 cow-calf pairs, and of rotational grazing says: "If you look at the natural system of grazing with wildlife, they move. They have patterns. So the idea of controlling animals with a fence and leaving them in one spot to graze all season is not a natural process. They need to move around."

He adds, "We try to use rotational grazing as much as possible. Our ranch varies from 1,600 to 3,000 feet in elevation with steep canyons and light to heavy soils. So we've got to have flexibility; every year is different. What nature provides us on our grasslands is what we get."

Pritchard uses high intensity, short duration rotational grazing with the goal of impacting the annuals as much as possible. "We use our grazing as a management tool to try and create plant diversity on the rangelands and get more perennials to come in – and we've accomplished that."

He continues, "I can show in photos that we've taken land that was marginal and actually improved it. But to do so, you've really got to pay attention, monitor the grassland, and constantly evaluate the plant community and what's going on out there. And, you have to give it rest."

Pritchard concludes, "There is no one size solution for all operations. I've found that really good grazing operations are those that have a hands-on management team that is committed to good resource management."

Pat Pfiel and her husband Brady were introduced to rotational grazing in 1978 when they came on board as ranch managers for a Florida property that was overstocked and overgrazed, but the owner did not want to decrease livestock numbers. Working with the NRCS, Pfiel proceeded to refine a rotational grazing method that got the ranch back on track. She's been sold on rotational grazing ever since.

The Pfiel's have managed multiple ranches ranging in size from 1,000 to 5,000 acres over the last 30 years, and Pat says, "I've applied rotational grazing principles to the properties we've managed and shown it works well. Even in the worst drought in Florida I did mob grazing and made it work. But the important thing to remember – and what science sometimes can't quantify – is that it's a managed system."

She adds, "You can utilize the concept of a rotational grazing system, but it still requires the management side – otherwise it will not function. It's not a cookbook. It really depends on what your goals are and what the grass can sustain. You need to do what's good for plant diversity and the cattle."

She concludes, "If you're not going to manage, then you might as well continuous graze, because continuous grazing is a lack of management."

Howard Straub of Michigan is a lifelong dairy producer who found the value of rotational grazing 15 years ago when he converted from a conventional dairy to a seasonal, grass-based dairy. Straub says finances and high costs drove his decision to make the switch. "As a conventional dairy we had a lot of money go through our hands, but we weren't able to keep a lot of it."

From 1993-1995, Straub and his wife developed their rotational grazing system for their dairy and have since increased from about 90 cows to 110 cows today. For his size of operation, Straub says this was the right move. "Going grass-based and using rotational grazing has made it extremely more profitable, we see more environmental benefits and it's a more enjoyable lifestyle," he says.

Gene Goven of North Dakota says that through utilizing rotational grazing, his 750 acres of native prairie has an increased carrying capacity of 230%. He attributes that to the improved plant diversity which he has managed for over the past 25 years. He operates as a custom grazer during the growing season to allow for maximum flexibility, and says the key to rotational grazing is flexibility and management. He shares that he also interseeds beneficial legumes to help with nitrogen fixation and boosting productivity.

Looking back on his experiences with rotational grazing, Goven recognizes that there is always more to learn about grazing management. He concludes, "It's a journey, not a destination."

PENNSYLVANIA HOSTED FALL TOUR

In September the National Grazing Lands Conservation Initiative (GLCI) fall steering committee's annual meeting was held in Harrisburg, PA. As part of this meeting, a three-farm tour featuring grazing operations in Southeastern Pennsylvania was held.

The day began by visiting the dairy farms of Ted and Melissa Miller and Duane, June, Neil and Kayla Hertzler in Perry County. Both farmers shared their success stories of grass based dairying. State Representative Mark Keller addressed the group at the Miller farm, speaking of the challenges of farming in Pennsylvania with the Nutrient Management Laws and the encroachment of development on farmland.

In the afternoon, attendees visited The Masonic Village in Elizabethtown, PA, to view the operation's beef grazing system and tour the campus of the Masonic retirement village. Gerald Tracey and Frank Stoltzfus were gracious hosts and tour guides at the facility. That evening, Dennis Wolff, Pennsylvania Secretary of Agriculture addressed the group at a Pennsylvania Dutch Style Buffet Dinner on "What Agriculture is like in Pennsylvania."

Pennsylvania NRCS grazing specialist Jana Malot organized the event and of it says it provided a good opportunity to showcase the state's strong, innovative grazing programs. According to Malot, this tour turnout was very good with more than 100 people attending the Perry County tours, and 85 people attending the Elizabethtown tour.

The National Steering Committee then held its fall annual meeting on Saturday, September 6, 2008. The main topic of discussion was planning the 4th National Grazing Conference to be held in Reno, NV, December 13 to 16, 2009.

SPRING MEETING IS PLANNED

The National GLCI Steering Committee will hold their annual spring meeting Monday, February 23, 2009 in Washington, DC. This is always an important event, as it provides an opportunity to meet with many legislative leaders. Final plans for the Dec. 2009 Fourth National Conference on Grazing Lands will also be determined.

Correction: The Nov.-Dec. GLCI News incorrectly stated that the Fall GLCI meeting and tour held in September in Harrisburg, PA, visited three dairies. Instead, the tour visited two grazing dairies and one beef operation.

UPCOMING GRAZING EVENTS

Jan. 31, 2009 – Profits from Pastures: Genetic Selection, Management and Marketing for Grass-fed Beef in the Northeast. Speakers include Kit Pharo, Colorado rancher, seed-stock producer, grazier, outspoken proponent of least-cost production and ranching profitably. Also Dr. Allen Williams, Chief Operating Officer, Tallgrass Beef Co., Researcher and Professor of Meat Science and Animal Science/Genetics. The one-day event will be held at The Century House, Latham, NY (Albany County). For more information, contact Tom Gallagher, Cornell Cooperative Extension Albany County at 518-765-3500 or Morgan Hartman at blackqueenangus@yahoo.com. Sponsored in part by NYS GLCI and others.

Jan. 31, 2009 – The Mark Twain Grazing Council will host their second Grazing Conference at the Quality Inn & Suites, Hannibal, Missouri. The one-day conference will feature experienced individuals describing their success in a variety of management procedures dealing with livestock production. Topics include: “Direct Marketing” by John Wood and Kevin Wolf who will share their marketing experiences. Rob Kallenbach will present “Legume Inter-seeding and Management;” Deanne Hackman, Attorney for Barrow Law Firm of Moberly, will discuss the “P’s & Q’s of Business Entities;” and producer Jeremia Markway will talk about “Improving Pasture and Wildlife Habitat with Grazing.” Phil Lewis will cover “Mechanics of Organic” addressing what it takes to make organics profitable – from soil transitioning, to certification, to marketing. “Co-Grazing Animals with Sustainability as the Major Goal,” will be presented by Steve Wallace, who utilizes sheep and cattle. For more information, contact the Ralls county SWCD/NRCS office in New London, Missouri, at 573-985-8611 or lori.robinson@swcd.mo.gov.

February Events

Feb. 3-4 – Mid-America Alfalfa Expo, hosted by the Nebraska Alfalfa Marketing Assn., Buffalo County Fairgrounds, Kearney, NE. Contact Barb Kinnan at 800-743-1649 or nebalf@cozadtel.net.

Feb. 9-13 – Minnesota Forage Days, tentative dates/locations. Feb. 9 -- Lamberton; Feb. 10 -- Grand Rapids; Feb. 11 -- Detroit Lakes; Feb. 12 -- St. Cloud area; Feb. 13 -- Rochester. For general information, email peter072@umn.edu or krishona@umn.edu. For updates, visit www.extension.umn.edu/forages.

Feb. 8-12 – 62nd Annual Meeting of the Society for Range Management, Albuquerque, NM

Feb. 19-21 – 17th Annual Wisconsin Grazing Conference, Stevens Point, WI. Contact Heather Flashinski at 715-289-4896 or grassheather@hotmail.com



PLAN NOW FOR 4NCGL

It may be 10 months away, but it is not too soon to begin making plans for the Fourth National Conference on Grazing Lands to be held Dec. 13-16, 2009 at John Ascuaga's Nugget Hotel & Casino near Reno.

The conference objective is “To Heighten Awareness of the Economic and Environmental Benefits of Grazing Lands,” and its theme is “Grazing Lands – A Winning Hand.” How can you participate? Consider making a presentation about your own grazing experiences. A call for papers for the event is underway, and farmers and ranchers are especially encouraged to make presentations. To submit an abstract to be considered visit <http://www.glci.org> for details. The deadline is May 1, 2009.

To have your GLCI activities or upcoming events highlighted in this newsletter, contact Kindra Gordon at phone 605-722-7699 or kindras@gordonresources.com.

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