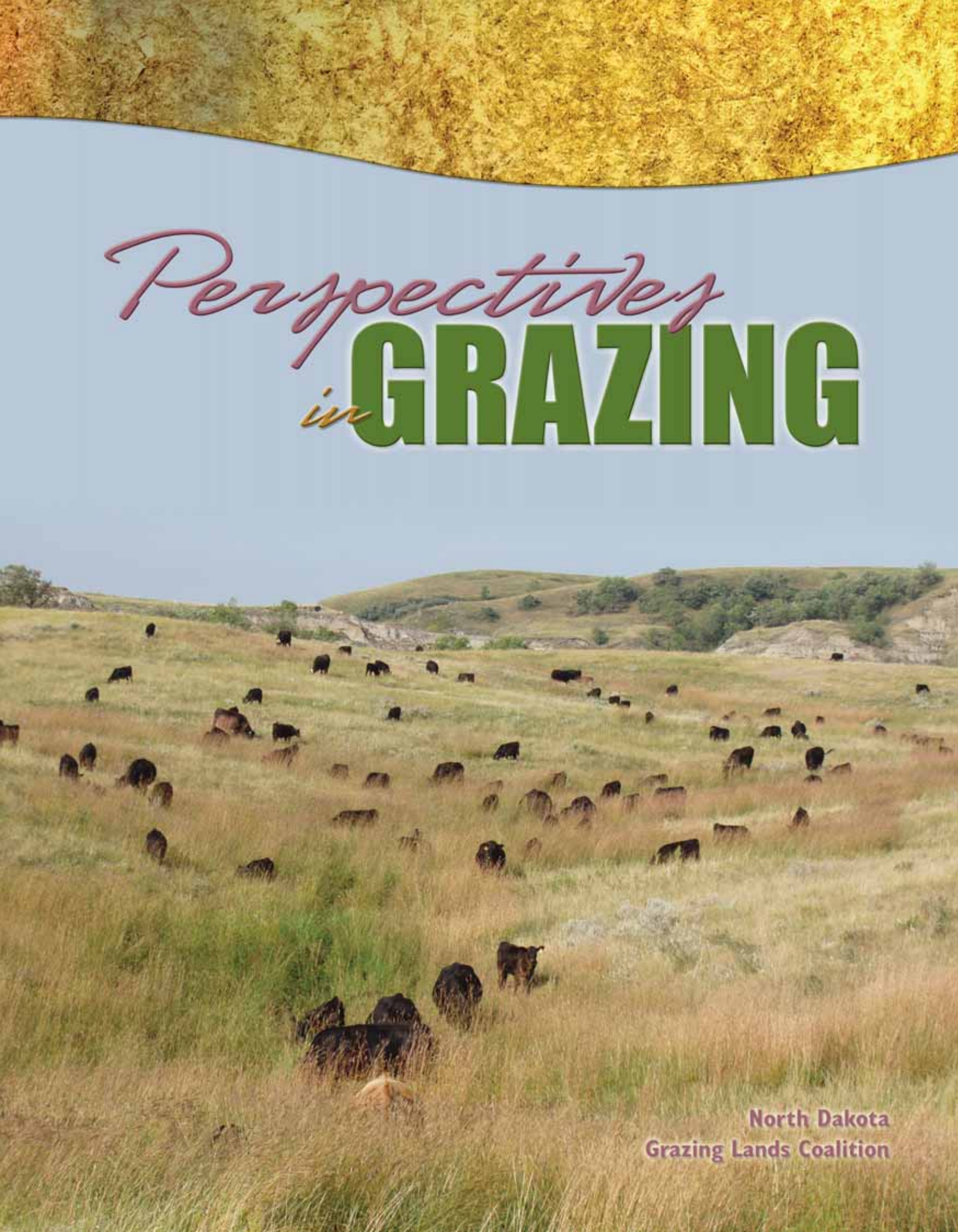
Perspectives in GRAZING



North Dakota
Grazing Lands Coalition

Perspectives in GRAZING

Note: *Many of the ranchers in this publication refer to "intensive grazing management" when describing their operations. The "intensive" part of that refers to the level of management and not to the degree to which the pasture is grazed.*

Introduction

The North Dakota Grazing Lands Coalition (NDGLC) would like to introduce to you these North Dakota producers whose operations are profiled in this booklet. They are an example of the many innovative North Dakotans who are staying informed of and implementing "improved" grazing management practices.

I hope that all of you, as I have, will benefit from the sharing that these producers have openly and willingly provided for this booklet.

Gene Goven

Gene, Goven, Chairman, NDGLC

P.S. If you have a chance, visit with any, or all, of the profiled producers for the two-way street information sharing that will result.

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NORTH DAKOTA GRAZING MANAGEMENT *Mentoring Network*

The North Dakota Grazing Lands Coalition has established a grassroots-based network of North Dakota grazing land managers who have agreed to provide advice to interested ranchers and agency personnel on grassland management.

The guidance mentors provide is based upon the knowledge and experience gained on their operations and the interaction they have had with other ranchers. Mentors are available to discuss a number of topics including: goal setting/decision making, grazing management, record keeping, fencing, water developments, grazing land wildlife, livestock movement, complementary grazing, using livestock as a management tool, pest management, grazing irrigated pasture, grazing management for expired CRP and cover crops. No two ranches are alike. Therefore, you need to adapt what you may learn from these individuals to your own goals, resources, and management abilities.

For more information or to download a copy of the Grazing Management Mentoring Network brochure, access the following web site:
http://www.nd.nrcs.usda.gov/programs/GLCI/glci.html

RANGE MANAGER'S *Forum*

In a cooperative effort, the North Dakota State University (NDSU) Central Grasslands Research and Extension Center and the North Dakota Grazing Lands Coalition have created a web-based forum with the objective of providing a friendly and helpful range management orientated discussion board for range and grassland managers in North Dakota. Through this forum, everyone from the novice to the well-seasoned range and grassland manager can share ideas, swap news, post and answer questions, exchange views, and discuss the latest developments in the area of grazing land management.

This forum is constructed and managed by the NDSU Central Grasslands Research Extension Center (CGREC) in cooperation with NDSU Ag Communications. The forum is hosted by the CGREC and can be accessed at the following web address:
http://www.ag.ndsu.nodak.edu/streeter/Forum/disclaimer.htm

NJOS Ranch

Contact John Lee Njos at 701.279.6920 for more information.

Location & Ownership

The John Lee and Ellen Njos Ranch is located 5.5 miles west of Rhame in southwestern North Dakota. Annual precipitation in this area averages 10.75 inches. Since 1973, John Lee and Ellen have been raising commercial Angus cattle.

Practices

- Twice-Over Grazing System
- Accurate Record-Keeping
- Water Developments
- Cross Fencing
- Placement of Mineral Feeders
- Aftermath Grazing in Fall
- Use of Tame Grass Pastures

Management History

Grass management is the major focus on the Njos Ranch. With limited water resources, fragile soils and limited grass species, a grazing system enables the ranch to efficiently increase productivity. John Lee and Ellen realized early on that they needed a change in management strategies to ensure the future of their ranch. John Lee explained, "In order for me to be efficient and successful in raising good quality cattle, it was important to be a good manager of my natural resources." The biggest improvement has been the net return through proper grass management.

Grazing begins about May 8-10 on tame pasture, depending on the growth of the grasses. John Lee keys on the third-leaf stage of growth to start grazing. In the first rotation, the plan is to graze each pasture three to five days. Around June 5, they start to "skim" the native pastures and then back to the tame grass pastures for the artificial insemination breeding season.

The goal of the system is change the season of use to promote plant growth and species diversity. Record keeping is a very important part of a successful grazing system. Keeping accurate dates and notes on the condition of that pasture can be a helpful planning tool.

The Njos Ranch is about 50 percent introduced pastures with poor soils and 50 percent native on the Badlands-type vegetation. To alleviate natural resource concerns, John Lee has developed and planted a mixture of western wheatgrass, intermediate wheatgrass, and green needle grass that has proven to be the best mixture for him. He explained that, "Even one to two additional plants per square foot, produces a significant increase in the total tonnage of forage produced on the ranch."

When alfalfa stands lose production, John Lee plants cover crop cocktail mixes to improve soil health and extend the grazing season. Water, fencing and mineral placement are essential tools in this grazing system. Several dams, springs, wells and two miles of pipeline

have been installed to improve water quantity and quality throughout all the pastures. Installation of new fences has made it possible to increase herd numbers and grazing days, distribute use and still have more grass at the end of the season. Placing mineral feeders in areas where there are undesirable plants – such as club moss – creates intensive hoof action. This process acts like a renovation, or range-ripping effect, to decrease undesirable plants, and stimulate new desirable growth. They also use low-stress cattle handling during calving, weaning, moving and working cattle.

Allan Savory of the Savory Center for Holistic Management, gave John Lee the insight to look at the "whole" picture of what was going on his ranch. The Njos family has also worked with the Natural Resources Conservation Service (NRCS) in sharing ideas and for support.

Benefits & Drawbacks

Throughout the development of this intense grazing system, the Njos Ranch has seen an increase in grass production and in the diversity of grass species. The ranch is now producing more pounds of beef per acre and weaning bigger calves. Overall, John Lee and his family have realized a better quality of life and been able to reduce the ranch's debt by running their operation more efficiently.

Record keeping and monitoring livestock movement are few drawbacks to an intensive grazing system.

"You've got to be out there watching and writing down the things you see," John Lee said. His advice to peers, "Manage your grass resources; it will produce the best return on your investment."

Benefits

- Increased Grass Production
- Diversity of Grass Species
- Better Water Infiltration
- Less Runoff
- More Litter
- Increased Wildlife Numbers
- More Pounds of Beef Per Acre

VIGEN Ranch

Contact Wendell Vigen at 701.863.6938 for more information.

Location & Ownership

The 3,860-acre Bar Z Ranch is situated in the Killdeer Mountains 20 miles northwest of Killdeer. The ranch, owned by Alwin Carus, is operated by Wendell and Linda Vigen. The Vigens operate a 180-head cow-calf and yearling ranch. Precipitation in this area averages 13 inches per year.

Management History

Cattle are wintered on native grass and supplemented with liquid protein. Hay is fed, as needed, based on the amount of snow cover. Replacement heifers and/or first calf heifers are turned out on a 45-acre crested wheatgrass pasture in early April. A native pasture of 220 acres, consisting of native shrubs, trees and creek bottoms, provides excellent shelter during calving and prior to starting the rotational grazing system. The Vigens manage their native grasslands by utilizing a twice-over grazing system. Cattle are turned into the native pastures when native grass is at the second-pod to the third-leaf stage in low-lying areas. An annual goal is to graze all pastures once by July 4, with stays in each pasture of 10 days to three weeks.

During first years of pasture rotation, Vigens used worksheets to document the range conditions. Now, according to Wendell, "Visual monitoring on horseback is old hat." The Vigens turned marginal cropland into pasture which provides more grazing area for cattle and wildlife. All pastures in rotation have live water or wells. Improvements provide more water sources, reduce concentrated grazing, reduce water runoff and help prevent soil erosion.

Practices

- Winter on Native Grass
- Calving is on Native Grass
- First- and Second-Calf Heifers are Flushed on Crested Wheatgrass Pasture in April
- Twice-Over Grazing System
- All Pastures Grazed by July 4
- Water Developments
- Cross Fencing
- Minerals Placed Away From Water
- A Reserve of Grass is Kept for Minor Droughts
- Marginal Cropland Turned Back to Pasture
- Worksheets Used to Document Range Condition

Since implementing the grazing rotation, Vigens are able to weather a minor drought or dry season because of the reserve of grass on the ranch. The ranch abounds in big bluestem, needle-and-thread and prairie sandreed.

Water improvements and 15,000 feet of cross fencing, combined with a twice-over grazing system, has increased carrying capacity by 15 to 20 percent, produced healthier, heavier calves and more consistent body condition on

the cows. Cattle are easier to handle, and Linda noted, "Days of the pasture rotations are like a day off to me." Linda usually moves the herds via horseback with the help of a ranch dog.

Mineral locations are not by the water sources. They are strategically placed to induce cattle to travel within the pasture.

Benefits & Drawbacks

Wildlife has increased both in numbers and quality. Wildlife thriving on Bar Z Ranch includes mule deer, white-tailed deer, elk, turkey, sharp-tailed grouse, partridge and pheasant.

Wendell believes ranchers one hundred years ago strived to conserve native rangeland just as ranchers do in the 21st Century but without today's technology. The only drawback in implementing twice-over grazing was the extensive fencing and, Wendell said with a smile, "That was our choice."

Wendell and Linda Vigen have successfully partnered with the NRCS and the Dunn County Soil Conservation District to conduct studies, make environmentally friendly improvements and evaluate their progress.

"To start a range management practice, look outside the boundaries and at established practices to see what fits your own particular ranch," quoted Wendell.

Benefits

- Increased Native Grass Species of Big Bluestem, Needle and Thread Grass, and Prairie Sandreed
- Carrying Capacity Increased by 15 to 20%
- Healthier, Heavier Calves
- Consistent Body Condition of Cows
- Cattle are Easier to Handle
- Increased Wildlife Numbers

Photograph by Rick Mooney

FLADELAND Ranch

Contact Scott Fladeland at 701.755.3479 for more information.

Location & Ownership

Scott and Debbie Fladeland's ranch is located in Mountrail County, southwest of Stanley. Their operation has increased with time. Much of the land was cropland which they converted to perennial tame grass forages, mostly made up of Manska Pubescent Wheatgrass and alfalfa mix. Their place is located in a drier area where the average annual precipitation is 9 to 11 inches.

Management History

The ranch runs 500 Red Angus and Red Angus-Hereford cross pairs, as well as 75 to 100 yearling replacement heifers per year. Mature cows weigh approximately 1,250 lbs. and calves wean at 570 lbs. Scott begins grazing tame grass pastures the beginning of May and natives the first week of June. They graze crop aftermath in the fall to reduce grazing pressure on natives earlier in the season. Fladelands graze the majority of the tame grassland early to prolong haying, allowing fields to be ready for cutting at different times. On normal moisture years, Scott has seen little to no loss in yields with grazing.

Scott and Debbie have changed winter feeding practices in recent years from feeding in one area to spreading out cattle over the winter. This has saved them time, labor and dollars as the livestock are spreading waste. They currently cover 100 to 200 acres per winter. They have seen tremendous results in plant growth and increased production on poorer soils where they rolled and fed bales.

Since 1992, the Fladelands have made significant changes to their management strategies including numerous acres of grass seeding, miles of cross fencing, water source development and a twice-over grazing system. They are always willing to try new and different practices and use some swath grazing when conditions allow.

Scott has worked with the U.S. Fish and Wildlife Service (USFWS) to construct several dams which has added to the success of his system. The Environmental Quality Incentives Program (EQIP), administered by the Natural Resources Conservation Service (NRCS), has also assisted with developing and applying his management strategies. Scott is constantly self-educating himself through articles and individuals that have information to share and is looking forward to many more sustainable years on the ranch.

Practices

- Twice-Over Grazing System
- Native and Tame Pastures are Used in Rotation
- Fall Aftermath Grazing
- Water Developments
- Cross Fencing
- Tame Grass Seedings
- Swath Grazing
- Partnership With USFWS and NRCS on Practices and Management

Benefits & Drawbacks

With this management system, Scott and Debbie have observed healthier and more productive grasses, better grass utilization, increased stocking rates, improved herd health, increased calf weights, better breed back and greater wildlife numbers. They have also seen savings with winter feed costs.

If there is a drawback, it would pertain to the added labor involved with fencing and maintenance of the fences.

Scott's advice to ranchers thinking of this type of system is: "The benefits of a system like this outweigh any extra time, labor and dollars to implement the plan. Can't afford to do it? Can't afford NOT to do it."

Benefits

- Healthier Pastures
- Increased Grass Production
- Better Grass Utilization
- Increased Stocking Rates
- Improved Herd Health
- Increased Weaning Weights
- Better Breed back
- Increased Wildlife Numbers

BRANDT Ranch

Contact Chester Brandt at 701.878.4966 for more information.

Location & Ownership

Northeast of Hebron in arid western North Dakota, lies the Chester and Jane Brandt Ranch. With less than 15 inches of annual precipitation, Chester describes his land as "pretty rough." The range produces western wheatgrass and prickly pear cactus on the clay flats, prairie sandreed and needle grasses on the hills and blue grama with silver sagebrush on the buttes.

Management History

In 1969 and fresh out of college, Chester started ranching on the home place. The size of the ranch hasn't changed much over the years. The biggest change on the 2,400 acres is the land use. Brandt is slowly returning his marginal cropland to grazing land. More than 80 percent of his erosive cropland acres now support a cover of protective perennial forage. The plan is to continue in that direction until the entire ranch is devoted to hayland and grazing.

Chester feels deep satisfaction that the conversion has eliminated "dust blowing" from the cropland. "It's important to a person's well-being to take care of those things," he said.

Brandt has a cow-calf operation of some 200 head along with 25 heifers, 12 bulls and a few horses. Within the last few years, Chester has made management changes to bring the herd more in tune with the rhythm of nature. Calving begins in mid-April. The sharp edge is off North Dakota's frigid winter by then. Weather is a bit friendlier to newborn calves and raw-boned ranchers.

Chester keeps the cattle on tame pastures until June 1 when he begins the rotation through the rangeland. He uses the June 1 date to gauge plant readiness for grazing more than any other factor. When the spring is warm and wet, and the grass is really growing, he may turn in a week or so earlier. He practices a twice-over rotation. In mid-September, the cattle graze crop aftermath and intermingled rangeland ending up close to headquarters by the time the snow begins.

Strategically placed water tanks and cross fencing have helped make better use of the land. The cattle graze beyond the steep dissected buttes because piped water is readily available. Salt and mineral are placed well away from the water source to draw the livestock into slightly used areas of the pasture.

Practices

- Planting Erosive Cropland to Pasture
- Calving Begins in Mid-April
- Twice-Over Rotation
- Crop Aftermath Grazing
- Water Developments – Pipelines and Tanks
- Cross Fencing
- Minerals Placed Away From Water in Less Grazed Areas

Benefits & Drawbacks

"I watch a lot of things closer," Chester reflected. He meant things like informative magazine articles, neighbors' successes and, of course, the bottom-line. Before making a purchase or upgrading machinery, he asks himself, "Will this make me any more money?" With crop production no longer a focus, he custom hires labor for seeding grass, spraying and manure hauling. "Better to hire than to try to find more hours in a day," figured Chester. "I lay out less cash and make better quality hay because I don't have to worry about farming. I use canola meal, sunflower screenings, dry distillers grain, wheat screenings and other by-products as feed. I do seed some oats and corn for feed."

Reflecting on a lifetime on the land, Chester advised, "Don't go for bragging rights at the coffee shop. Look at what you have and figure out how to use it. Watch the people with experience. Don't jump too fast into a new enterprise or a piece of machinery. Think about it and talk to others about what works. What good is a million dollars if you spend $999,999 to make it? It's the net you want, not the gross. Plus, working with livestock and nature is good for your mental health!"

Benefits

- Less Focus on Cropland
- Less Cash Layout
- Better Quality Hay (More Time to Produce It)
- Better Calving Conditions
- Good Mental Health

MILLER Ranch

Contact Kenny Miller at 701.663.9350 for more information.

Location & Ownership

The Miller Ranch is located in southeastern Morton County approximately 25 miles south of Mandan along the Missouri River. The rangeland varies from heavily wooded draws to bentonite hills similar to the Badlands of western North Dakota. The ranch is owned by Kenneth Miller, his wife, Bonnie, and their five children, Melissa, Michael, Kimberly, Carrie and Ryan. The ranch consists of about 1200 acres of rangeland and 350 acres of cropland of which 250 acres is irrigated grains and alfalfa. Average annual precipitation is about 15 inches.

Management History

The Millers run a small fall-calving herd consisting of 40 head, a custom grazing herd consisting of 125 to 150 head, and a custom winter- feeding operation. They winter feed on cropland fields to reduce the amount of labor involved in hauling manure. Cows begin grazing tame-grass pastures in May. These tame pastures have been converted from poor-producing cropland fields. Around the first of June, cows are moved into a short duration, high-stock density grazing system on native pastures. Ken initially moves the cows every day or two when spring grass is growing rapidly, and every three to four days as the grazing season progresses and plant growth slows.

The intensively managed grazing system consists of 36 paddocks with an average size of about 30 acres. Power fences are used to separate these grazing units. Centrally located water tanks service the pie-shaped paddocks. Tanks and pipelines have taken the place of ponds and dams, providing a more reliable source of high-quality fresh water. The intensively managed rotational grazing systems have increased the carrying capacity of the ranch three fold. There is always ample amount of grazable forage that gives Ken the freedom to "graze according to the environment."

Ken raises corn, barley, alfalfa and cover crops. Cover crops are a big component in this operation. They build soil health, increase water holding capacity, increase infiltration and complement the grazing system. Irrigated cropland provides the fall and winter grazing of crop aftermath. It also provides winter feed for the Miller Ranch. "Irrigation provides a constant feed supply and gives us the flexibility to increase livestock numbers, said Ken. He plans to establish an ultra high-stock density grazing system on some of the irrigated cropland acres. In the winter, the Millers custom graze up to 200 head in addition to their fall-calving herd.

Leafy spurge has posed a challenge on the ranch. In the past, expensive chemicals were used to try and control this pest with less than desirable results. Ken now uses flea beetles to control this invasive plant.

Practices

- Short-Duration, High-Density Grazing Systems
- Tanks and Pipelines Have Replaced Dams and Ponds
- Power Fences for Boundary and Cross Fences
- Custom Grazing
- Flea Beetles Used to Control Leafy Spurge

Benefits & Drawbacks

Benefits include increased carrying capacity and flexibility to graze according to the environmental conditions. Intensively managed rotational grazing has increased the need for management on the ranch. Timely rotations require well-kept records and some technical "know how," but results in more efficient use of the land and a healthier rangeland resource.

Ken recommends going to as many seminars and workshops as possible. "Talk to people and be open to try new ideas."

Benefits

- Increased Carrying Capacity
- Surplus Grass
- Flexibility to Graze According to Environmental Conditions
- Efficient Use of Land
- Healthier Rangeland

GOVEN Ranch

Contact Gene Goven at 701.448.2405 for more information.

Location & Ownership

The Goven Family Ranch is located approximately 12 miles north of Turtle Lake in the Coteau area of central North Dakota. The Govens manage a 2,200-acre diversified no-till crop and livestock operation. Average precipitation ranges from 14 to 17 inches.

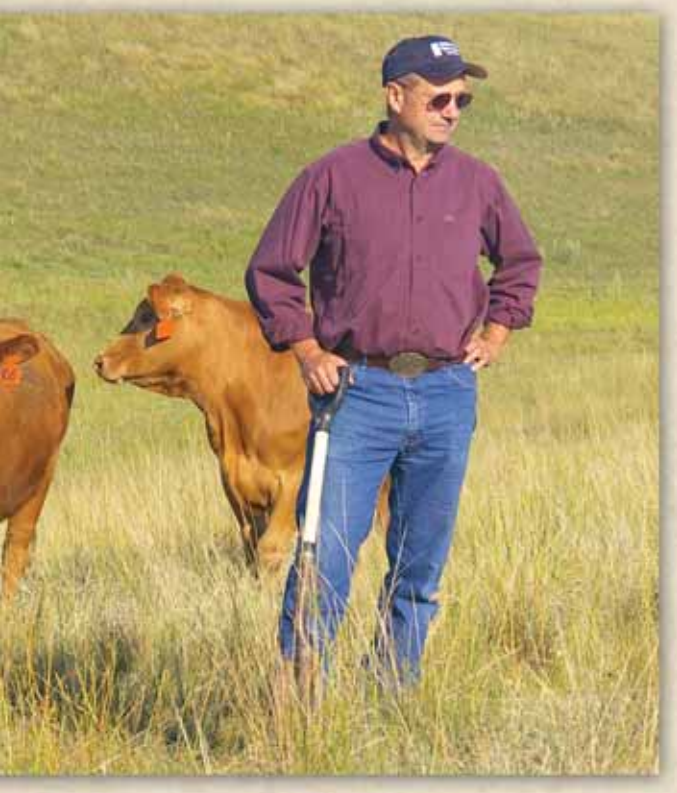
Management History

In 1967, Gene purchased the operation, managing the cropland, grazing land and livestock in the manner common for the time. Gene used conventional cropping practices consisting of a simplified crop rotation with some spring and fall tillage and season-long grazing management.

In the early 1980s, Gene began to notice changes in his pastures which concerned him. Grazing patterns were the same year to year. Cattle heavily grazed some plants while never touching other areas of the pasture. Certain "undesirable" plants were increasing while some of his better forage grasses were becoming harder to find. These observations lead Gene to begin asking questions about different grazing management options and lead him to install a five-pasture, twice-over grazing system in 1982.

This initial step towards a more intensively managed grazing program showed promise. However, as Gene increased his understanding of plant growth and livestock grazing behavior, he began to recognize the need to change his grazing management priories and philosophy. Since he could not raise anymore beef than he had grass, Gene shifted to being a grass manager first and a cowboy second. This seemingly simple shift in mindset led Gene on a 20-plus year journey towards a management philosophy which integrates the grazing land, cropland, tame pasture and hayland into a single unit with a goal of sustainability through improved soil health.

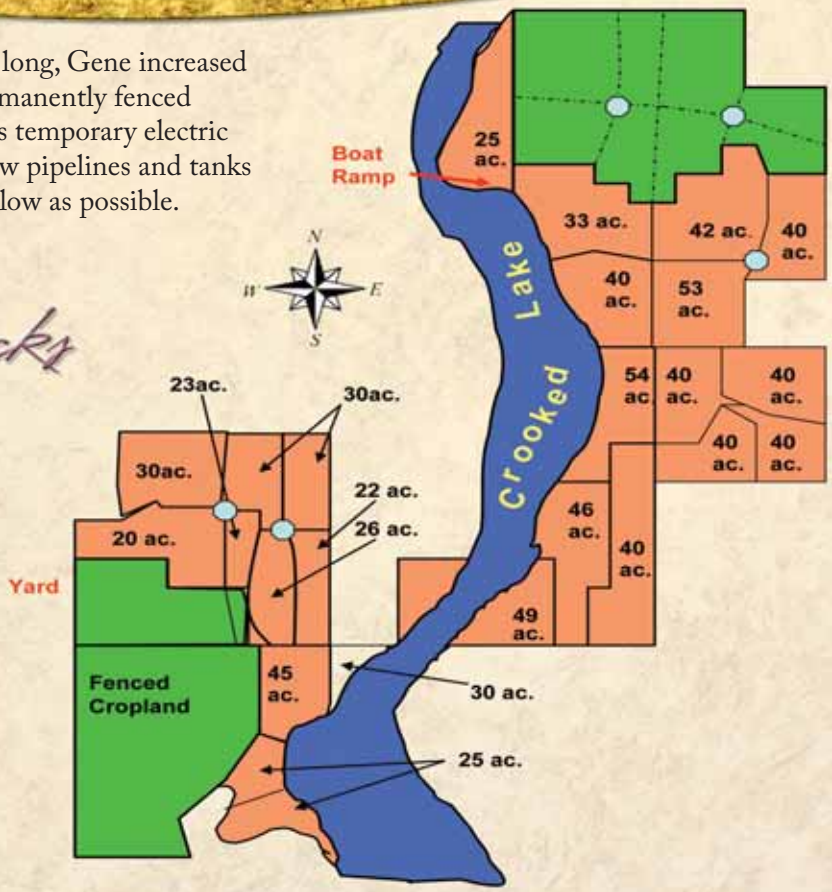
Gene's primary tool in his pursuit of improved soil health has been the livestock. Gene substantially increased the infiltration rates and soil organic matter levels across his unit. He focuses on the "time and timing" of grazing events, monitors the recovery of grazed plants, no-till plants, adds diversity and cover crops to his crop rotation and incorporates planned crop aftermath, swath and bale grazing into his grazing rotation.



Practices

- Managed Time-Controlled Grazing Systems
- Cross fencing
- Wells, Pipeline, Tanks
- Monitoring and Record Keeping
- Planned Crop Aftermath Grazing and Cover Crops
- Swath and Bale Grazing

To control where his livestock graze and for how long, Gene increased his pasture number from the initial five to 30 permanently fenced pastures. If he needs additional pastures, he builds temporary electric fencing. Cattle access fresh water via wells, shallow pipelines and tanks which serve multiple pastures to keep the cost as low as possible.



Benefits & Drawbacks

Gene has never been able to attribute the success of his grazing and cropland management program to any single item. Instead, he views it as a host of "little things" which, when brought together, begin to complement each other resulting in improvement beyond what any single item or management change could deliver.

The results of this "host of little things working together" include a sustainable stocking rate increase of 230 percent over the pre-1982 levels and increased pounds of beef produced. Gene increased soil organic matter levels in the cropland from an initial 1.5 to 1.8 percent to a current 3.5 to 3.8 percent. During drought years, he improved forage yields due to increased infiltration, lower soil surface temperatures and deeper rooted plants. Plus, his cropland yields have increased with lower fertility costs.

Gene said, "To achieve a goal of sustainability, you need to be a grass manager first and a cowboy second."

Benefits

- Increased Stocking Rates
- Increased Pounds of Beef Produced
- Increased Organic Matter in Cropland Soil
- Improved Forage Yields Due to Increased Infiltration, Lower Soil Surface Temperatures and Deeper Rooted Plants
- Increased Cropland Yields with Lower Fertility Costs

BROWN Ranch

Gabe and Shelly Brown, and son, Paul, own and operate Brown's Ranch. The ranch is located 2 miles east of Bismarck. They purchased the ranch in 1991 and have increased the size of the ranch to 4,200 acres of owned and leased land. The primary emphasis is to develop a sustainable operation by focusing on improving the natural resources. The cowherd consists of 250 Balancer cows while the number of yearlings varies from 50 to 250 depending on forage conditions. Annual precipitation averages 16 inches.

Contact Gabe Brown at 701.222.8602 for more information.

The Browns take a holistic approach to the management of their ranch. They firmly believe that if they manage the natural resources – soil, water and air – for improvement, they will also improve their ranch's productivity and profitability.

The grazing and cropping systems complement one another. The grazing systems currently consist of 66 permanent pastures. The design of these pastures allow Brown to further divide them with polywire. They installed shallow pipelines to provide fresh water to the majority of the pastures.

Pictured below is one of the systems that includes 350 acres of expired CRP land that Browns converted to grazing land.

Gabe monitors forage growth and the cattle graze that forage in a manner that will best improve the resource. The majority of pastures are grazed less than 4 days total the entire year, thus allowing maximum recovery time.

The Browns have noticed a substantial improvement in soil health resulting in higher organic matter levels, increased water infiltration rates, increased water holding capacity, increased forage quality, quantity, and diversity, all which leads to higher profitability.

Practices

- Grazing System Includes Native Rangeland, Tame Grass/Legume and Expired CRP Fields
- Integration of Cover Crops into Grazing System
- Interseeding Legumes into Tame Grass Pastures
- Shallow Pipelines and Tanks for Improved Water Quality
- Careful Observations are Used to Assure Adequate Plant Recovery Periods

All of the cropland is in a zero-till cropping system. The Browns grow a diverse number of crops including alfalfa, corn, oats, barley, peas, sunflowers, and winter triticale. Along with a variety of cover crops such as turnips, radishes, hairy vetch, cow peas, hybrid pearl, german, proso millet, sorghum sudan grass, sweetclover, sugar beets, lentils, buckwheat, soybeans and red clover. Browns use these cover crops extensively to improve soil health while providing fall and winter grazing for the cattle. Using cattle to "harvest" the crops allows the Browns to regulate how much residue is left to protect the soil and feed the soil macro and micro organisms.

Benefits & Drawbacks

Since the Browns switched to a sustainable grazing system aimed at improving soil health, they have noticed a number of changes. Proper grazing management has lessened the impacts of drought years due to healthier plant communities. Improvements include a much healthier and diverse plant community, higher organic matter, higher worm populations in the soil, more ground cover or litter, improved infiltration rates and more wildlife. Major family benefits include a much less stressful way of farming and ranching, along with a greater economic return.

Gabe advised, "Talk to others who have implemented practices. It takes time and you have to learn and accept that not everything you implement will work. Think outside the box and surround yourself with others who think likewise."

Benefits

- Improved Natural Resources – Soil, Water, Air
- Greater Economic Return
- Much Less Stressful Ranching and Farming Operation
- Lessened Drought Impacts

VOLLMER Ranch

Contact Troy Vollmer at 701.943.2431 for more information.

Location & Ownership

Vollmer Angus Ranch is a forage-based livestock operation located in northeastern Burleigh County approximately 10 miles northeast of Wing or, about 70 miles northeast of Bismarck.The ranch is operated by the Vollmer family and includes 600 cows grazing more than 5,000 acres in the mixed grass, prairie Coteau area of the state. Average precipitation ranges from 15 to 17 inches per year.

Management History

Alvin and Verna Vollmer founded Vollmer Angus Ranch 53 years ago as a diversified operation, including beef, dairy, swine and small grains. In 1968, their son, Allen, and his wife, Bev, started a registered Angus herd. Today, the operation continues to grow and progress with their son Troy, daughter Tamra, and their families becoming more involved in the operation.

Raising registered cattle poises some unique challenges for the Vollmers' grazing management.Troy's present grazing management consists of over 1,000 acres of tame grass separated into 23 pastures and 3,700 acres of rangeland fenced into 40 pastures.They use various pasture combinations throughout the summer for the eight breeding herds. Grazing management intensity varies and includes two three-pasture rotation systems, two seven-pasture systems, two eight-pasture systems, one nine-pasture system and an 11-pasture system. Vollmers adjust grazing and recovery periods throughout the grazing season to account for ever-changing growing conditions with a goal of at least 60-day recovery periods for all pastures. Based upon Troy's records and his observations, they are developing plans to further intensify the grazing management.

On the Vollmer Angus Ranch, they manage the livestock and cropping enterprises so each benefits and complements one another.Vollmers have completely no-tilled their crops since 2002 and recently added annual cover crops to the overall cropping system.They emphasize forages such as pea-oat mixes, corn silage, forage barley, alfalfa and small grains as well as a "cover crop cocktail" consisting of proso and pearl millets, sunflower, soybean, cowpea, turnip and oilseed radish.

Vollmers use cover crops as a source of high quality fall forage for livestock at a time when perennial pasture forages are declining, enabling the livestock to enter the winter feeding period in better condition.Fall grazing cover crops increases recovery periods for

Practices

- Cross Fencing
- Wells, Pipelines and Tanks
- Multiple Grazing Systems
- Increased Plant Recovery Periods
- Cover Crops for Forage and Soil Health
- No-till Forage System
- Conversion of Hayland to Pasture
- Multi-year Electronic Livestock/Grazing/Cropping Record Keeping

Vollmers' native and tame pastures during the critical fall growth period. This extra fall recovery time complements Vollmers' existing level of prescribed grazing management, ensuring good soil surface cover, healthy, deep-rooted plants on both the rangeland and tame pastures and diverse native plant communities on the rangeland.

Benefits & Drawbacks

The integration of the grazing and cropping enterprises through the use of cover crops and crop aftermath grazing has proven to be a beneficial management strategy for the Vollmer Angus Ranch. The grazing systems and cover crops ensure high-quality forage and a high level of livestock performance throughout the year, reducing input costs, increasing water use efficiencies and ensuring good forage production even during a dry year. All of this continues the process of improving the overall grassland and cropland health.

Troy concluded, "Some may consider the added management to be a drawback. But, with today's need for added efficiency, these systems have become a way for us to answer those challenges."

Benefits

- Increased Plant Diversity and Production
- Improved Forage Quality
- Improved Soil Health
- Enhanced Infiltration
- Simplified Electronic Record Keeping
- Improved Water Quality for Livestock

FETTIG *Ranch*

The Fettig Ranch is located in south central North Dakota, southeast of Napoleon. Brothers Steve and Chuck Fettig operate the 3,360-acre ranch. They operate a grazing operation without owning an animal. They hire out their land and labor for contract, grazing 1,300 yearlings every summer. Their input includes all of the fencing, water management, rent and land payments, moving and rounding up the cattle.

Contact Chuck and Steve Fettig at 701.452.2813 for more information.

Four herds historically grazed on this ranch – mostly season long – but some had a two-pasture move. After attending a holistic management seminar, the Fettigs were convinced that better management could increase production and animals units. The current operation consists of 31 pastures separated by a one-wire electric fence. They prefer a flexible moving schedule during the grazing season and any one pasture may be grazed with no particular sequence, depending on growing conditions. The season of use varies from May 5 through September 15, with recovery periods of approximately 45 to 75 days. This gives the plants a chance to grow and recover. The pastures are only grazed for one to four days, depending on the size of the pasture.

The ranch is approximately 80 percent native range and 20 percent tame grasses which provides a perfect mix for early season use on the tame grasses, enabling the native forage to reach optimum growth stages before grazing.

Livestock fecal sampling is a part of the management and record-keeping procedures that go along with this operation. Fettigs read the results of total digestible nutrients, fiber and protein to determine how the cattle are responding to the forage. From these results, they determine if they need to make management changes. During dry, hot seasonal weather, plant recovery may be slow. Fettigs may move cattle at a slower pace, resulting in less stress on the cattle and allowing an extended growth recovery time.

The stocking rate, along with intense management, has resulted in good rangeland conservation and profitable gains on the yearlings. Records show that the steers gain 2 lbs. per day and the heifers gain 1.75 lbs. per day.

Practices

- Contract Grazing of Yearlings
- Short Duration Grazing With Long Rest Periods
- Fecal Sampling to Monitor Response to Forage

Benefits & Drawbacks

Fettigs' ultimate goal and objective is for the cattle to gain as much as possible without damaging the rangeland. Their other goals are to improve the water quality in the Beaver Creek watershed. The Fettig Ranch is adjacent to the Beaver Lake and, by not overgrazing and causing compaction, the surface water is infiltrating much quicker. They are not concerned with water quality around the ranch because runoff is reduced. By keeping the water in place, rangeland health increases, and so does the production.

Intense grazing management of this kind requires continuous monitoring; a few hours can make a huge difference in the grazing impacts. Fettigs can determine when it's time to move with a quick review of the pasture – generally one to four days apart – so there is not a lot of time away from the ranch during the summer months. By frequently moving cattle, they naturally control flies by moving them away from the fresh manure in each pasture that is the habitat for newly laid fly eggs. This cuts down on diseases and discomfort from the biting pests.

Fettigs manage brush easier with the 1,300-head herd. They observe cattle grazing off the tops of weeds and brush and the brush doesn't do well with the large number of cattle moving through the patches. If they need to add a little more control of undesirable plants, they place salt blocks in the middle of the patches.

Economically, the Fettig Ranch has increased its profits with less risk. They do not have to face the unpredictable winter weather and feeding costs. They also do not have to spend the time out in the cold, stormy March weather of calving season. Steve finished by stating, "The reduced workload allows for more family time," a benefit that is beyond economic calculation.

"We were seeing some problems with brush encroachment and weed infestations due to season-long grazing ... the grass could not compete. We were also looking for a way to increase our production without adding land to our operation," said Steve.

Benefits

- Increased Water Infiltration
- Reduced Runoff
- Increased Range Health
- Better Fly Control
- Improved Brush Management
- Increased Profits with Less Risk

BARTHOLOMAY Ranch

Contact Keith Bartholomay at 701.882.3460 for more information.

Location & Ownership

Located in southeast North Dakota, the operation is situated on the north edge of the Sheyenne Delta and the beaches of glacial Lake Agassiz located north and east of Sheldon. The average rainfall should be between 18 and 20 inches. Comprised of mainly Black Angus cattle, numbers run between 200 to 325 cow-calf pairs and 20 to 90 replacement heifers.

Management History

Keith and Kent Bartholomay manage grazing with four grazing systems and the integrate crop aftermath. The summer grazing systems are comprised of a four-pasture, twice-over; a three-pasture, twice-over; a three-pasture, three-over; and a seven-pasture intensive-management system. Bartholomays generally try to let native grasses achieve the four-leaf state prior to entering a pasture. Keith noted they sometimes turn cattle out earlier in the season to decrease the amount of Kentucky bluegrass and promote an increase in native warm-season species.

Bartholomays credit crop-aftermath grazing as the key to their success. They plan crop rotations and management practices with the forage aspect in mind. They plant small grains, corn and sunflowers in the same units to vary the times and kinds of aftermath, and regrowth grazing for a more nutritionally balanced diet.

To facilitate this effort, the Bartholomays installed permanent barbed and high-tensile fences around existing water sources. They formed pastures with portable electric fence within cropland units. They converted 150 acres of cropland back to native vegetation, of which 120 acres is in the Conservation Reserve Program. They plan to convert an additional 200 acres of cropland back into to native grasses.

The Bartholomays typically wean their calves at 525-plus pounds. They gauge their success by the percent calf crop and pounds of mechanically harvested forage. Due to crop aftermath, they decreased the need for harvested forage from 6,200 lbs. per cow in the mid 1990s to 2,300 lbs. per cow in the late 1990s.

Practices

- Crop Aftermath Grazing
- Crop Rotations are Managed With the Forage Aspect in Mind
- High Tensile Fences
- Portable Electric Fences

Benefits & Drawbacks

Through their grazing management system, cattle use the pastures uniformly and native vegetation has flourished, which results in additional wildlife cover and food sources. The major benefits are profitability due to less feed costs, being out on the ground watching grass grow, flourishing wildlife, and cattle grazing instead of Bartholomay working in a tractor to make, haul or pitch used feed.

The biggest drawback is the additional time it takes to study and understand the grass and forage resources and making the proper moves between pastures. Making the proper moves during haying and harvesting can be difficult.

It does take additional time to study and understand the grass and forage resources. However, in the end, this knowledge will pay long-term dividends. Also, making the proper moves during haying and harvesting can be difficult when time is such a precious commodity. Another area of consideration is identifying if the nutritional needs of the cattle are being met.

"Watch your feed costs and capitalize on resources you are not currently using. We can control what we spend, but we cannot control what we get," noted Keith.

Benefits

- Uniform Use of Forage
- Increased Wildlife Habitat
- Reduced Feed Costs
- Healthy Native Range
- Decreased Need to Mechanically Harvest Forage

Perspectives in GRAZING

Jeff Printz

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