SOUTH DAKOTA GRASSLAND COALITION

Grassroots

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Celebrating 20 years: Finance Committee by Sandy Smart

Finances are an extremely important part of any business and it is no different with the Coalition. Over the years, the Coalition has increased its financial capacity through grants and contracts, which has enabled us to do great work. This growth also comes with a huge responsibility in financial accountability and oversight. The Coalition has been blessed with accounting services provided through the South Dakota Association of Conservation Districts. We are especially indebted to Angela Ehlers, Lauren Miller, and Connie Penny. These folks helped develop policies and procedures that have streamlined approval and payment of invoices and allowed for a much easier record keeping system to track matching dollars.

Coalition board members and others serving on the finance committee are Larry Wagner, Jim Kopriva, Jim Faulstich, Dave Ollila, Sandy Smart, and Judge Jessop. The work of the finance committee is not as glorious as the education committee, yet just as vital to the success of our mission. Without the dedicated service from these folks, we would not be nearly as successful as a group as we are today.

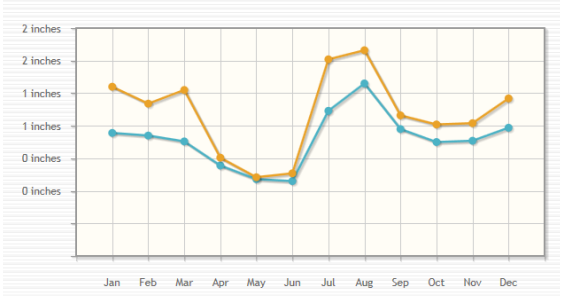
Looking ahead, the board has decided to change our organizational structure to a 501 (c)3 non-profit. Currently, the Coalition is a 501(c)6 non-profit. The primary difference between a 501(c)3 and a 501(c)6 is that the actions of the non-profit are to help the general public (501(c)3) versus benefitting only its members (501(c)6). While the old model has worked for us without problems, it does limit the opportunity for other organizations to donate to the Coalition's work. For example, many charitable organizations or foundations only donate to 501(c)3's because they benefit society and they can receive a tax write-off. A donation to a 501(c)6 is seen to be only helping out its members. Thus, the Coalition sees a huge opportunity to reach out to environmental minded foundations to further our cause of protecting and enhancing our grasslands. We see this as a public benefit, especially if you think of the ecosystem services that grasslands provide such as healthy soils, clean water, habitat for wildlife, and aesthetic views.

The unsung heroes of an organization typically are folks that do the mundane or behind the scenes work. This is probably true with the work of the finance committee, yet their work is important if not more important than what is seen and heard. The next time you have to pay a bill, think of the many folks that are required to make this work smoothly. The Coalition would like to thank the work of the finance committee over these last 20 years!

Range 101: Rangeland Ecosystems of the World - Desert Grasslands of USA by Sandy Smart

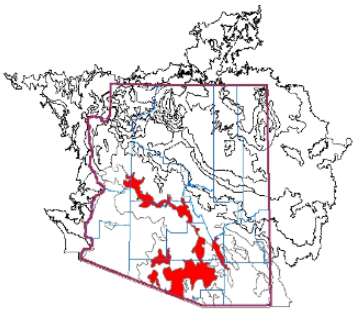
Desert grasslands occur between and around the Sonoran, Chihuahuan, and Great Basin deserts. They typically form at elevations between 4,000 and 6,000 ft. Above this elevation you tend to get more Pinyon-Juniper woodlands and below this elevation you tend to get desert scrublands. Grass species tend to be perennial bunchgrasses, both warm-season and cool-season. Familiar warm-season grasses found in these regions are blue grama, hairy grama, sideoats grama, buffalograss, little bluestem, red threawn, and sand dropseed. Less familiar are black grama, curly mesquite, silver bluestem, tobosa, and weeping lovegrass. Familiar cool-season grasses are prairie junegrass, foxtail barley, and slender wheatgrass. Exotic cool-season grasses like Kentucky bluegrass, timothy, and smooth bromegrass occur at higher elevations. Unfamiliar cool-season grasses are mountain bromegrass, mutton bluegrass, spikebent, tufted hairgrass, and Texas wintergrass.

Climate of these desert grasslands tend to have two peaks of precipitation (winter and late summer) in the southwest and one precipitation peak in late summer in the south (New Mexico and Texas). Soils range from mollisols (high precipitation >15 inches) to aridisols (<10 inches) and often tend to be red in color due to oxidation. Organic matter is usually quite low.



Precipitation pattern for southcentral Arizona Loamy Hills 10-13" precipitation zone (NRCS, 2018).

A good example of desert grasslands can be seen in the ecological site description (ESD) in Arizona, site R040XA109AZ Loamy Hills 10-13 inch precipitation zone outlined in red on the map to the right. This particular site develops on alluvial fans and terraces of low mountains. Perennial grasses like curly mesquite and tobosa make up most of the annual production followed by sideoats grama, black grama, bush muhly, and big galleta. Annual grasses make up about 10%, forbs about 12%, and shrubs make up 19% of the biomass.



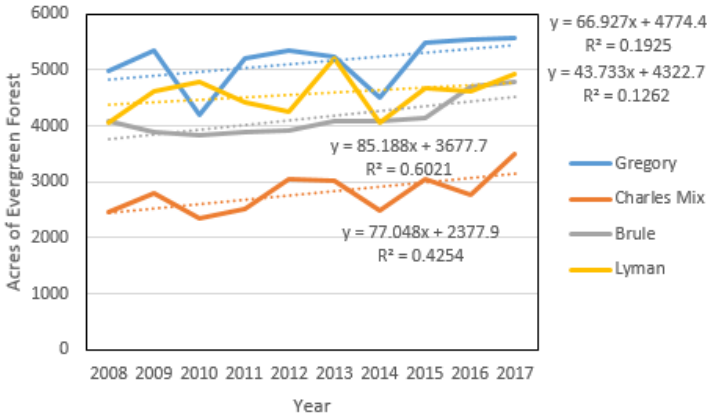
Loamy Hills 10-13" precip. zone in Arizona (NRCS, 2018)

On a normal year the total grass production is about 475 lbs/acre. Since many of these species are bunchgrasses and did not evolve under historic grazing by large ungulates, utilization should be kept to 35-40% which translates to about 20% harvest efficiency. Thus a safe stocking rate would be about 0.12 AUM/acre or about 8 times less than the typical stocking rate in western South Dakota. If you would like to learn more about this ESD or other sites in your area see this website (https://esis.sc.egov.usda.gov/Welcome/pgReportLocation.aspx?type=ESD).

Mid-Missouri River Prescribed Burn Association: Battling the "Green Glacier" by Sandy Smart and Sean Kelly

A group of concerned ranchers and landowners in southcentral South Dakota have formed the first ever prescribed burn association in our state and call themselves the Mid-Missouri River Prescribed Burn Association (MMRPBA). This group is just over two years old, forming back in February 2016. At stake is what the locals call the "green glacier" or advancement of eastern red cedar trees. Grasslands affected by cedar tree encroachment are at great risk for loss of plant diversity, decreased wildlife habitat, and loss of forage for livestock.

Over the past 10 years, cedar tree cover has increased at a rate of 270 acres per year over a four county region along the Missouri River in southcentral South Dakota (see figure to the right). Currently, almost one million acres of grassland/pasture is at risk to cedar tree encroachment in just this four county region alone. Fire (natural or prescribed) has been the primary force that has historically kept eastern red cedar trees in check. Without the application of cost effective brush control strategies, future loss of grasslands will only accelerate.



Cedar tree acres in Gregory, Charles Mix, Brule, and Lyman Counties from 2008-2017 (USDA-NASS CropScape, 2018).

The rugged terrain, complex fuel loads, and minimal man-made and natural fire breaks located in this region requires a higher degree of cooperation among landowners compared with burning grass dominated fuels in a highly dissected landscape of agricultural fields and roads. In response to this very need, the MMRPBA was formed. Through assistance from SDSU Extension, Nebraska and South Dakota NRCS, Pheasants Forever, and The Nature Conservancy, this group has received some technical training and gained new members. In 2017, they were able to safely and successfully burn 638 acres on seven properties ranging from 2 to 250 acres. This year, the group has had a delayed start to the 2018 burn season, due to the late April blizzards, and probably won't burn as many properties. A couple of successful 2018 burns occurred at Tom Hausmann's and the Platte Colony. As you can see by the pictures, it took a tremendous amount of planning and coordination. All in all it was a very successful burn at both locations. Labor and equipment are limitations that the group plans to address in the future. There are only so many days in the spring when the weather cooperates for the group to burn safely. Planning large, landscape scale burns across property lines reduces the need to install time consuming fire breaks. Using the natural fire brakes makes it easier, quicker, and safer to burn these pesky trees. To view a video on one of the groups successful burns go to the Coalition's website and click on the "Our Amazing Grasslands" Grim Ranch (https://www.sdgrass.org/amazing-south-dakota/).

MMRPBA preparing to burn at Tom Hausmann's on April 12 (upper photo) and a successful burning of cedar trees (lower photo) on May 4, 2018 at the Platte Colony. Photos by Sean Kelly and Brittany Steffen.

The 10,000 Foot View: Brett Nix on Ranching with the Big Picture in Mind by Kate Rasmussen

Brett Nix grew up a few miles south of Murdo, South Dakota on the same ranch he and his wife Lori live on now. I visited the Nix place in the thick of calving on a balmy, May morning. We stood in the middle of his calving pasture next to a few calves hiding in the fresh grass. Curious mother cows and pregnant heifers started to make their way over to us from the nearby hills while Brett reflected on how much his ranch has changed over the last decade. He no longer spends his calving season in barns with a calf puller in hand like he used to.

Brett Nix (Photo by Kate Rasmussen, 2017).

Eight years ago, he stepped out of the calving barn for a short break from managing every mini crisis that comes with tending needy heifers. Worn out from working long hours with discontented cattle, Brett leaned against a panel and surveyed the herd of bred heifers milling around their pen. One heifer walked over to Brett through ankle deep mud and snow, stopped, then looked him square in the eye for a moment as if to say "you expect me to have my calf in this?" Brett recalls the turning point for his ranch. "I looked at the cow, her quality of life, and the unbelievable workload we had. It was a crisis of some sort." He and his family have weathered March calving seasons for as long as he could remember, but something had to change.

Identifying the problem became his first step to making changes in a more promising direction. Calving in winter conditions was a problem. The labor-intensive system was tough on the cattle and their caretakers. Mother cows weren't content in a sloppy pen, the number of calves needing to be pulled seemed too high, not to mention the young ones had to fight the cold once they made it on the ground.

Brett started researching new ideas and methods of running cattle on the grassland ecosystem. Lori encouraged him to attend an event put on by the Grassland Coalition where he heard Jim Gerrish speak. Gerrish had an "instrumental impact" on Brett's approach to making necessary changes on his place. The talk challenged him to question his practices and ask: "what do we want our lives to look like" then find the steps to get there. Asking big picture questions, Brett

Nix Continued on Page 5

Nix continued by Kate Rasmussen

found, helped him pick out specific weak links in the business: "We've really become 'Why' people." The only reasons for calving out in the March cold was to accommodate planting in the spring and because he thought calves had to be a certain weight in the fall. Brett ran into a recurring issue when he questioned his reason for farming his land: the inputs didn't match the rewards. The farming enterprise put a strain on the soil and financial recourses without a substantial return. On top of that, farming and March calving were parts of the business no one on the operation particularly enjoyed.

Brett focused their genetics on easier keeping animals by selling the tall, heavy boned cows and raising bulls compatible with pasture calving: "We do our best to produce cattle to match the groceries we've got." He began selling farm equipment to fund fences and, over time, worked in a grazing rotation the grass responded well to. He found moving fewer groups of cattle for short durations; followed by allowing grazed pastures ample amount of recovery time ended up producing more "groceries" than the land had been producing in the past. "Doing anything new is hard even if it's good," Brett said as he reflected on the overhauling of his place spanning the last decade, "but doing things more naturally has made a lot of our major problems go away in the long run." Simplifying calving by moving the date didn't remedy everything on the Nix place but moving the date and rearranging land use helped iron out some of the major wrinkles. His calves and their mothers require drastically less hands on attention than before and the grass has become more productive on both wet and dry years. He's no less busy than he was eight years ago-- he does most of the work himself rather than needing to hire four employees and he's able to spend more time on the parts of ranching he's passionate about.

Brett has served on the SDGC board of directors for about a year. "Being on the board is my way of giving back to the organization that gave to me," he said as we watched the content mother cows graze with their calves close by. Despite having his plate full, he continues to give his time to the Coalition. He has recently taken on organizing projects like the Coalition Pasture Walks. Educational events like the Pasture Walks provide others with the learning opportunities that helped him zoom out and improve his cattle operation: "Being exposed to new ideas opens your mind to new possibilities. One day can change the dynamic of your business."

Brett Nix evaluates a set of cows before May calving starts (Photo by Kate Rasmussen, 2017).

Kate Rasmussen is a freelance writer and ranch hand based near Belvidere, SD.

Unintended Consequences of Organic Farming by James Doyle

Grassland recently converted to organic crop production (Photo by James Doyle, 2018).

Many consumers are increasingly drawn to organic foods because of perceived benefits to their health and the environment. In response to market signals, organic crop production is also increasing. Under current market conditions, it is easy to understand why some producers or landowners are considering organic production. With low conventional commodity crop and cattle prices, producers are attracted to the higher prices of organic commodities, and the higher rental prices appeal to landowners. However, organic farming can come with a steep environmental price tag that many people, especially consumers, are unaware. Under the typical structure, farm land must be managed in accordance with the organic guidelines for three years prior to becoming Certified Organic, also known as "transitional organic." This can be a challenging time for producers, as they learn how to farm organically (e.g. weed, pest and fertility management, specialized equipment, record keeping, etc.) while receiving little to none of the market incentives for producing an organic crop. This presents a significant hurdle for converting existing cropland to organic production and requires a long-term commitment to making the transition. However, grassland (generally pasture) can be converted directly into organic production if the pasture can be certified to be chemical free for the prior three years, removing one of the biggest obstacles to transitioning to organic.

Of course, chasing short-term market conditions at the expense of sound, long-term resource management practices can have unintended consequences for the environment. High commodity prices in 2012 led to a large amount of conversion of grasslands as farmers tried to take advantage of high prices. Those market conditions didn't last, but the effect on the grasslands did. It is much easier to plow the grass down than it is to reverse course and restore grass on cropland. A similar trend appears to be occurring now with organic farming, albeit at a smaller scale, and specifically with grassland conversion because of the transitional period bypass. Just like 2012/13, when producers tried to add a little bit more farm ground, it often ended up being marginal land with high erosion potential and low productivity. Many of these converted grasslands are likely go-back grass where someone in the past tried farming it, realized it wasn't suitable for farming, and eventually returned it to grass. More troubling though, is the possibility for loss of true native grassland that has never been farmed. Without an understanding of where these native grasslands exist, and with policies that encourage grassland conversion, there is a great risk of losing more and more of what little native prairie remains. The intent of this article is not to downplay or discourage organic production, or demonize producers for trying to earn a higher return; but simply to shed some light on one of the rarely discussed issues involved with organic agriculture. Producers are encouraged to consider the long-term ramifications of their decisions and ensure that they are coming from a place of long-term natural resource stewardship rather than chasing short-term market conditions.

SDSU Extension

James Doyle is an Extension Natural Resource Management Field Specialist in Winner, SD.

Maybe We Should Calve Later by Garnet Perman

The cold snowy "spring" of 2018 will be remembered by many South Dakota cow calf producers as a nightmare calving season. Perhaps it's time to think about calving later next year. Most proponents of later calving were influenced by Dr. Dick Diven, who published research in the early 1990's advocating calving much later into the spring than the usual February-April window that most Northern Plains producers are accustomed. According to the Ranching for Profit website, Diven presented data showing that at 40ºN (the Kansas-Nebraska border) a cow in body condition score 6, calving in February, would take an average of 73 days to start cycling. Calving in June, an identical cow would start cycling in just 38 days. He showed that the closer calving is to the summer solstice, the shorter the postpartum interval becomes. He also showed that the further north you go, the more extreme the difference.

Pat Guptill, Quinn, SD made the switch to May and June calving over 10 years ago. Guptill follows Diven's advice to match peak cow nutritional needs with peak grass performance. For their ranch, that means an early May calving date. "According to Diven, I'm two weeks early, but we have tame grass that peaks early in May." Bill Slovek, Philip, SD, is still in the process. He used to start mid-February. Every year for the past several years he's moved his calving dates by a week for everything but some breeding stock. Theoretically his calving start should be later than early April, but shorter gestational periods have made the switch slower. This year he'll start breeding July 11, with plans to move calving back farther by at least a couple of weeks.

The benefits of later calving include: (1) Lower fuel consumption--Guptill 's records show he used 1600 gallons of diesel fuel to feed cows when he calved in March, and only 295 gallons calving in May. (2) Less hay fed means less hay put up, again increasing profitability. With later calving, cattle can be in a condition score 3 in March and end up being condition score 6 when they calve due to available forage instead of supplementation. (3) Cows in excellent body condition at calving breed back easier. (4) They don't pull as many calves as they used to, and the calves generally tend to be healthier. Calves are born with a summer hair coat. The stress of cold, wet weather and muddy or snowy calving conditions is hard on their still developing immune system. (5) Decreased stress and labor for the human component. The day of this interview Guptills checked the herd in the morning and confidently spent the entire day at a track meet. Slovek noted that is a lot more fun to look for baby calves in green grass than searching snow banks. Also, the days are so much longer now that he can check before sunset and first thing in the morning and not bother checking at night, even with heifers.

A common concern regarding later calving is that summer heat may affect conception rates. Neither Guptill nor Slovek has found this something to be concerned about. Slovek is more concerned about enlarged udders from producing too much milk because of the fresh forage. "I may have to back off on milk," he said.

Things to consider when planning later calving dates include possible changes in weaning dates and marketing. Slovek said, "The calves will be lighter, but not as much as you'd think, and they'll be worth more per hundred." He's found that December weaning is easier on calves than October weaning. Guptill leaves them on the cow well into the winter.

Understand that peak forage varies by location and type of forage available. A general guideline for native pastures is observing when local wildlife such as deer or antelope give birth. Both men have found that later calving adds more than it takes from their operation. "I will go out of the cow business before I go back to March calving," said Guptill.

Garnet Perman is a freelance writer and ranches with her husband, Lyle, near Lowry, SD.

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Brookings, SD 57007

Calendar of Events

Event	Date	Location	Contact Person	Phone
SD Professionals and Youth Range Camp	June 5-6	Sturgis	Dave Ollila	605-394-1722
Bird Tour	June 8-9	Lowry	Judge Jessop	605-280-0127
GrassFed Exchange	June 20-22	Rapid City	Pete Bauman	605-882-5140
Leopold Conservation Award Tour	June 25	Union Center	Judge Jessop	605-280-0127
Rangeland Days	June 26-27	Redfield	Dave Ollila	605-394-1722
Grassland Management School	July 25-27	Watertown	Pete Bauman	605-882-5140

Please remit any comments, suggestions, or topics deemed necessary for further review to: Sandy Smart, SDSU Box 2170, Brookings, SD 57007, alexander.smart@sdstate.edu, (605) 688-4017