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VOLUME 20 ISSUE 5

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Celebrating 20 Years by Sandy Smart

As we approach the fall season, anticipating harvest, hunting, and weaning this year's calf crop, the Coalition is eagerly waiting and planning the 20 year celebration. The event will be held on Wednesday Dec. 12th at the AmericInn in Chamberlain. Speakers will include Jerry Doan, Barry Dunn, original founders, as well as board members. We will have time to reflect on past accomplishments and discuss new ideas for the future.

The Coalition has accomplished much to be proud of and the crown jewel of it's outreach is the annual South Dakota Grazing School. This year marks the 16th year of the annual Grazing School. The school is hosted the second week of September in Chamberlain and allows producers and agency personnel a chance to dive deeper into a holistic approach to grazing management. Topics include goal setting, ranch inventory and monitoring, plant identification, plant physiology, stocking rates, grazing systems, soil health, animal nutrition, drought management, and animal handling. The school's innovative teaching and learning styles include a variety of hands-on activities and group discussions. Probably the best hands-on learning exercise is the paddock size activity, where participants have to build a paddock for cattle to achieve a certain level of forage utilization for one day.



Penned cattle waiting for their paddock to be built by grazing school participants (Photo by Judge Jessop, 2018).

Participants rave about the school and this quote, from someone taking the first Grazing School in 2003, is the reason we put it on every year, "I would like to be on a mailing list of other educational activities like this. I thought this was a terrific two days. I need to participate in more of these. It has opened many more questions than it has answered, but has challenged me to think, and that is good. Thanks!". The Coalition has had so much interest that they have held two Grazing Schools each year since 2010. In addition, there are plans to increase the number of schools to three or four per year in the near future and host them in other locations to better serve the growing need.

Probably the second most notable outreach effort, which has resulted in high profile media publications and videos, is the annual Leopold Conservation Award. This award, brought to South Dakota in 2010, took a tremendous amount of work and was championed by Jim Faulstich. Unique to South Dakota is the number of sponsors to

Celebrating 20 Years continued by Sandy Smart

support the annual effort. We have over 15 sponsors that contribute to the annual award in South Dakota whereas most other states have just a few. This speaks to the tremendous support, trust, and belief in the Coalition and the South Dakota Cattlemen's Association, who co-lead the Leopold Conservation Award effort. The news articles and videos are published in various media outlets and have had thousands of views on Youtube.

Ideas generated from the Leopold award created the Friend of the Prairie Award, annual planner, and the Amazing South Dakota video series. All of the past award winners and videos can be seen on our website at www.sdgrass.org.

Please plan on attending the 20 Year Celebration, connect with old friends, meet new ones, and be encouraged about the current and future work of the South Dakota Grassland Coalition.



Representatives from the Aldo Leopold Foundation, South Dakota Grassland Coalition, and South Dakota Cattlemen's Association awarding the first Leopold Award to Rick and Marlis Doud in 2010 (Photo by S. Smart, 2010).

Range 101: Rangeland Ecosystems of the World - Nebraska

Sandhills Prairie by Sandy Smart



University of Nebraska-Lincoln Gudmundsen Sandhills Laboratory Ranch (Photo by S. Smart, 2000).

In 1992, I made a westward trek from Wisconsin to the Cornhusker state to start my new job at the University of Nebraska-Lincoln as a research technician and begin my Ph.D. training in range management. I spent the next nine years assisting some 26 graduate students and numerous undergraduates in various range management projects. This experience formed my love for the prairies of the Great Plains. I particularly loved going west to the Gudmundsen Sandhills Laboratory, a working University ranch located north of U.S. Highway 2 by Whitman, Nebraska. The Sandhills characteristics are of fine sandy soil (obviously), large rolling hills, orientating northwest to southeast, and wet meadows. As you drive west to east, the hills decrease drastically to gentle rolling topography and sand bluestem gives way to big bluestem.

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Range 101 continued by Sandy Smart

The vegetation is warm-season grass dominated. According to the ecological site description for the upland sandy ecological site, sand bluestem and prairie sandreed make up about 48% of the annual forage production. Little bluestem and other warm-season grasses make up 44% with only 16% coming from needleandthread, a cool-season grass. The rest of the annual production comes from forbs like stiff sunflower, cudweed sagewort, dotted gayfeather, goldenrods, and ragweed and shrubs like yucca, lead plant, rose, and pricklypear cactus.

The unique nature of the sandy soil and underlying geology acts like a big sponge to soak up rainfall and recharge the Ogallala aquifer. The wet meadows were historically dominated by tall warm-season grasses like big bluestem, switchgrass, and indiangrass. Overtime, annual haying after the water table dropped in mid- to late-July, converted the plant community to introduced cool-season grasses like smooth brome grass, orchardgrass, timothy, and reed canarygrass. In some cases, the wet meadows were purposely seeded to introduced cool-season grasses.



Sandhills prairie near Bassett, NE (Photo by S. Smart, 2000).

Grazing is typically year-round with feeding hay from the meadows in late winter. Alfalfa production from irrigated pivots provide much of the protein for winter feeding and while cows are in late gestation. If you've ever flown from Sioux Falls to Denver on a clear day, the Sandhills landscape is dotted with central pivot irrigation. Another unique feature regarding this ecoregion is that invasive cool-season grasses like smooth brome grass have not invaded the uplands (except for a little bit of Kentucky bluegrass). The sandy soil and semi-arid conditions are not conducive for brome grass unlike finer textured soils outside this region. I have fond memories spending many hours on my knees clipping forage samples with good friends and colleagues. The locals called it "God's Country", but you hear that saying everywhere you go.

SD SRM Annual Meeting October 9-10: All about the Tours by Sandy Smart



The South Dakota Section for the Society for Range Management (SRM) is having their annual meeting in Chamberlain on October 9-10. This year's focus is to get out on the land rather than sit and listen to presentations. Pete Bauman, SRM First Vice President, is planning the meeting in cooperation with the Grassland Coalition. Two Excellence in Range Management Award tours are planned on Tuesday Oct. 9th. The first stop will be at the Reis Ranch in the morning and the second will be at the Totton Angus Ranch in the afternoon. The evening will conclude with a short business meeting, and a banquet, followed by a crazy auction to raise scholarship money. On Wednesday, we will take a bus tour to view the cedar tree control work of the Mid-Missouri River Prescribed Burn Association. This is a great set of tours you won't want to miss.



Optimum Over Maximum: Bart Carmichael's Philosophy for Low-input Ranching by Kate Rasmussen



Bart Carmichael (Photo by K. Rasmussen, 2018).

When Bart Carmichael moved to the family ranch two days after graduating high school, his grandfather ran cattle through four seasonal pastures. Bart and his wife Shannon bought Wedge Tent Ranch from his grandfather in 1996 and, with the help of their four kids, have managed to change the ranch over the years for the better. Curious about how he took the ranch from season long grazed hardpan to productive, diverse range, I asked Bart when he started changing his ranching model. He brought his laptop to the kitchen table and pulled up the meticulous records he's kept for the last two and a half decades. He scrolled through pages of categorized data on what seemed like every animal he had ever laid eyes on. Bart found the year 2000 and said, "Here is exactly where it all changed."

Seven years into running the ranch, Bart noticed his weaning weights were below average. He supplied his cattle with protein and mineral supplements and increased the weaning weights by fifty pounds. A detailed observer and thorough note taker, Bart saw that even though his calves were heavier the cost of growing them bigger

made him back-track financially. This realization lead Bart to charge head first into a low input management style.

He began cross fencing the original four pastures into smaller paddocks with the idea of increasing carrying capacity. The previously season long grazed pastures were split into half sections, then quarter sections, and eventually into forty's. Bart put water tanks at each end of the paddocks and began rotating his herd through, letting the paddocks rest for a year after a three-day grazing stint in each. As we drove past stands of big blue stem and clusters of winterfat, Bart explained that the ranch grows "mostly cool season grasses so we graze once through. Going once through with the cattle has really helped our warm season grasses."

Ranching is full of unintended outcomes. When Bart began cross fencing the original four pastures with high tinsile electric fence, his goal was to increase carrying capacity and to get his cattle to graze pastures more evenly. It wasn't long before he realized the unintended outcomes for rotating his cattle and resting his rangeland were better breed up and improved plant diversity. This result has him convinced that breeding success rates follow healthy rangeland: "We're not creating anything here, just realizing what nature can do." For Bart, making ecological and financial improvements are a matter of paying close attention to how utilizing grass affects the numbers on his spreadsheets.

Bart Carmichael continued on Page 5

Bart Carmichael continued by Kate Rasmussen

“The whole world is input oriented. People are after the silver bullet—inputs rather than utilizing what’s already there,” Bart explained his movement toward optimum over maximum production meant that he relied more on the resources he had available rather than pouring money into protein supplements.

As we drove across his paddocks, Bart pointed out the bulky railroad ties he had for corner posts along his electric fences. He told me how his son spent days hauling the railroad ties around and tamping them in. It would be years before Bart found a better way to stabilize his electric fences with light fiberglass posts. The corner posts are a good example of Bart’s optimum over maximum philosophy. Like with his calves, he could get more done cheaper with the lighter, low input option than he could by overbuilding.

Once he landed on a fiberglass post he liked, he started an enterprise selling the posts across the country. Customers often call Bart asking for his advice on fencing and pasture rotations to which he answers, “it depends.” When taking on these grazing principles, he explains that “it’s gotta be adaptive. There are rotations that are good for cattle and rotations that are good for grass—the art is finding the balance.” Although he chose to ranch right away rather than attend college, Bart could teach this stuff better than any of the professors I had in school.

When he began his movement toward a low-input grazing system, Bart attended a South Dakota Grassland Coalition sponsored event where he met Terri Gompert and came away with new knowledge to bring back to his ranch. Bart sought out wisdom from other grazing management figures like Wayne Berry and Jim Gerrish. Bart stayed involved with the Coalition and has served on the board of directors for the past three years because he believes in the value of healthy grasslands and the role education plays in holding onto them.

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

What’s in a Label? by Garnet Perman

The American Angus Association developed the metrics and launched the Certified Angus Beef (CAB) brand in 1978. CAB’s success impacted the US cattle industry and has encouraged many other entities to pursue a certification marketing concept. Of the 89 certification programs registered with the USDA, as of May this year, 57 have the name “Angus” in the label. Other breed specific programs include Hereford, Wagyu, and Akaushi with two programs each and one Longhorn label.

Words found in label names are often not so informative but sound good: premium, exclusive, natural. So how can a consumer know exactly what that labels mean, and how do we as producers capture the premium that label may bring?

In more recent years, marketing programs have started to address not just meat quality, but also animal welfare or environmental concerns. Marketing research done by corporations such as Walmart and Costco shows that their consumers are very interested in having the option to purchase beef from animals that were handled humanely, not treated with antibiotics or hormones, or fed animal by-products, and were raised in an environmentally sustainable manner. Even if the consumer is hesitant to pay more for those practices, interest has effectively pushed those companies to take a critical look at their supply chain. Most large companies that purchase huge quantities of beef have sustainability programs directed at pursuing financial, social, and environmental attractive goals that their customers desire.

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What's in a Label continued by Garnet Perman

In South Dakota, Demkota has two USDA labels, Demkota Ranch Black Angus and Demkota Ranch, each have the same requirements except that the Black Angus label has to be $\frac{3}{4}$ Angus genetics. Both labels require carcass characteristics that indicate good quality, flavorful beef. Beef Quality Assurance Verified is a voluntary program developed by the National Beef Cattle Association and the Food Safety and Inspection Service. Designed to boost consumer confidence, producers in BQA programs maintain detailed records of husbandry practices and treatments performed on their cattle. The requirements for each state vary somewhat. Information for South Dakota can be found on the BQA website.

Feed lots such as Wulf Cattle Company in McLaughlin and Chamberlain operate value added programs that look at the entire supply chain from the ranch on up. Wulf features three value added programs: Verified Natural Beef (VNB), Global Animal Partnership (GAP) Certified Cattle and Non-Hormone Treated Cattle (NHTC). VNB is a trademark that speaks to health concerns regarding antibiotics and hormones and GAP and adds an animal welfare component to the Verified Natural Beef requirements. NHTC include animals that have been treated with antibiotics but qualify for VNF or GAP in every other way. VNB and NHTC programs qualify for export to China and Saudi Arabia. NHTC can be sent to the European Union as well. Each program includes a paper trail that includes ID tags. The animals must move through approved channels to the consumer and all require annual third party verification. Wulf uses IMI Global as their third party. IMI Global has links to a number of verification programs on their website.

The Audubon Society recently initiated a program that addresses environmental interests. Each rancher adopts a Habitat Management Plan that is uniquely developed to address site-specific habitat goals and bird conservation opportunities. To be certified, each ranch must also meet program protocols related to forage and feeding, animal health and welfare, and environmental sustainability. Animals in the program must spend their entire lives on grasslands. Feedlots are not allowed, and growth hormones and antibiotics are strictly prohibited. Because the program is new, not many people are aware of it, but the hope is that “bird-friendly” beef production will become standard practice for all grassfed beef producers. The contact person for Audubon in South Dakota is Josh Lefers (jlefers@audubon.org).

The American Marketing Service (AMS) and the Food Safety and Inspection Service are the government entities that monitor marketing claims. AMS offers a suite of audit services that allow a company to develop its own standard and have AMS verify those practices. With that type of verification, AMS publishes the specific components of that company's standard on their website so that any interested person could understand each program's similarities or differences.

The Food Safety and Inspection Service operates independently of the AMS. They require documentation when a certain label such as 100% Grass Fed is applied for to verify the truth of the claim. For example, organic grassfed animals must be accompanied by an affidavit from the producer when they are sent to market. Completely understanding a product's claims may require some research beyond just reading the label. The good news for Coalition members is that many certification and verification trends align well with the organization's vision of encouraging sustainable and profitable management of grasslands.

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

The Green Side UP: Grassland Management School Offers Something for Everyone by Pete Bauman

Back in January, I wrote an article for this newsletter introducing you to the new Grassland Management School that we planned to host in July. I'm happy to report that we indeed did launch this new school, which was held in Watertown from July 25-27. We were very pleased with this first attempt, and received excellent student feedback that should even further improve this school in the future.

The rationale for the new school was fairly simple and stemmed primarily from the success of the annual Grazing School and the recently established Soil Health Coalition's Soil Health School. In both of those schools there are often many questions that relate to grassland establishment and management that simply cannot be addressed due to time constraints. When coupled with student feedback from our other tours and workshops, it became obvious that there was a need to offer more in-depth education on the broad spectrum of tools and techniques utilized in other types of grassland management beyond grazing practices. Included in this list of needs was everything from soil preparation, chemical use/avoidance, planting techniques, seed harvest, fire use, and everything in between!

Day one of the Grassland Management School found our class size bursting with nearly 50 students and about 20 support staff/instructors. Based on feedback we'd received over the years, we anticipated a class dominated by landowners and producers. While we had producers present, approximately 10, many of the students were agency/NGO land and program managers who also dealt extensively with private landowners and associated conservation programs. These individuals are critical in communicating grassland management methods to landowners, and their participation in the class will thus be extended to the private sector. Day one of the school started with basic introductions to grassland history, biology, functions and values followed by in-depth instruction on soil/seedbed preparation, chemicals and carryover concerns, choosing seed mixes, and a field trip to state-owned and private grassland restoration/renovation projects.

Day two introduced the students to the art and science of grassland establishment and maintenance as well as included topics from native rangeland management to fertilization to planting techniques, with a full line of planting and harvesting equipment on display. Field trips focused on private lands with an emphasis on managing new plantings for (and with) grazing, prescribed fire, mowing, and other tools. Also included were stops to grasslands owned by The Nature Conservancy, the US Fish and Wildlife Service, and private CRP fields. The takeaway for day two was diversity, diversity, diversity! Instructors emphasized the need to plant and maintain diversity in new plantings, including a broad spectrum of broadleaf plants for livestock, wildlife, and pollinators.



Students stand in a US Fish and Wildlife service ultra-dense pollinator planting formulated to compete naturally with weeds such as Canada thistle (Photo by P. Bauman).

The final ½ day of the school highlighted landowner/producer testimony focused on utilizing grasslands for traditional and non-traditional enterprises, use of fire in grassland management, and the value of grasslands for soil health, water quality, and erosion control. The sessions were capped by NRCS staff demonstrating the rainfall simulator and the new wind erosion simulator.

Based on student feedback, the school really hit the mark. Therefore, the coalition will continue to offer this school annually as part of the full suite of education opportunities we support. Watch future newsletters or visit sdgrass.org to stay abreast of this as well as other educational opportunities offered throughout the year.

Pete Bauman is an Extension Range Field Specialist in Watertown, SD.



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Calendar of Events

Event	Date	Location	Contact Person	Phone
SD SRM Meeting	Oct 9-10	Chamberlain	Jan Rounds	605-882-5140
Holistic Resource Management Workshop	Oct 16-18	Bowman, ND	Amanda Njos	701-523-8257
SD Cattlemen's Association Annual Meeting	Nov 27-29	Huron	Jodie Anderson	605-945-2333
Leopold Award Presentation	Nov 28	Huron	Jodie Anderson	605-945-2333
SDGC 20 Year Celebration	Dec 12	Chamberlain	Judge Jessop	605-280-0127
Ranching for Profit	Jan 20-26	Rapid City	Ranch Management Consultants, Inc.	707-429-2292

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