SOUTH DAKOTA GRASSLAND COALITION

Grassroots

VOLUME 23 ISSUE 2 MARCH 2021

INSIDE THIS ISSUE:

Range 101: Grass-Cast By Sandy Smart

Drought is a relatively common occurrence in the central and northern Great Plains. Spring drought (April-June) occurs 19-35% of the time in our region (see Smart et al. 2021 "Forum: Critical Decision Dates for Drought Management in Central and Northern Great Plains Rangelands" open access article in *Rangeland Ecology and Management*). Spring droughts are particularly troublesome because most of our forage production comes from cool-season grasses. Summer droughts have less impact on pasture production but can result in lower crop yields.

Every good drought plan has key trigger dates that incorporates 1) past, current, and forecasted climatological information; 2) livestock and feed market information, 3) rangeland vegetation monitoring; and 4) a suite of management actions to bring balance between livestock demands and forage supply. The hardest part about "pulling the trigger" in the drought plan is having confidence in making the right decision. No one has a crystal ball to look into the future to have 100 percent certainty, however past experience and a build-up of scientific information and recent technological advancements can provide us with the necessary tools to make good drought management decisions.

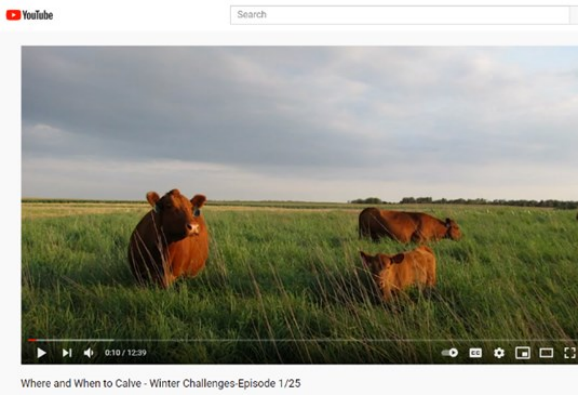
One of those technological advancements is the new grassland productivity forecast tool called "Grass-Cast" (available online at https://grasscast.unl.edu/). This collaborative effort by USDA Agricultural Research Service, Colorado State University, National Drought Mitigation Center, University of Arizona, and the USDA Northern Plains Climate Hub provides forage productivity maps at the county level for the Great Plains and the Southwest USA. Starting on May 1st maps are generated for the upcoming growing season. The maps are updated every two weeks and to adjust seasonal estimates as more weather data is added to the models. In South Dakota, April through June rainfall is critical to producing forage on range and pasture. Since most ranchers turn out livestock on pasture in early to mid-May, having a reasonable estimate of grass production by then would be extremely helpful. By July 1st, most of the annual forage production has occurred; so waiting for rain won't help much. Thus the best use of Grass-Cast will be in May and June.

Grass-Cast shows three options or "what if" (above-normal, near-normal, and below-normal) precipitation scenarios. The maps produced on May 21, 2018 (shown on page 3 of the newsletter) give equal chances (33%) for each scenario. The red, orange, and yellow colors on the map indicate below-average forage production compared with the county's average; green, teal, blue, and dark blue colors indicate above average forage production. As interpreted, the colors that indicate below-average for-age production dominate two out of the three maps. Only the "above-normal" precipitation map shows adequate forage production for western South Dakota.

Range 101 Continued on Page 3

The Green Side Up by Pete Bauman

Alternative Calving Considerations video series now available



A little more than a year ago, the Coalition's Board of Directors decided to move ahead with a novel outreach program for livestock producers focused on timing of the calving season. This project stemmed from months of prior conversation about how to help positively influence livestock profitability on the farm and ranch, especially for newer or younger producers. In leading up to the event, the Coalition held several 'café talks' around the state to gauge the interest of producers in learning more about alternative calving dates. Essentially, participants in these early conversations were interested in moving calving dates but identified several barriers or concerns that kept them from making the change.

Taking this valuable feedback into account, the board began developing plans for a series of workshops that would help 'walk' producers through the process of assessing whether a change in their calving program was warranted.

In February 2020, the Coalition held three 1-day workshops in Ipswich, Chamberlain, and Faith featuring livestock producers who have shifted calving seasons away from the more popular early periods of February, March, and early April toward later dates of May and June. Each workshop featured a panel of producers willing to share the details of how they transitioned their calving operations to better reflect ranch management goals that included profitability, animal health, resource management, and family life. Along with the live panel discussions, nearly 30 producers also participated in recorded interview sessions where they shared in-depth details of how, why, and when they transitioned to a calving program that was better synced with natural cycles. These interviews were then edited and developed into a series of videos now available to the public.

To access the full video series, visit the SD Grassland Coalitions website at www.sdgrass.org. Click on the Events tab for access to all 25 videos in the series.

When and where to calve
- winter challenges
- facilities and infrastructure
- pasture shelter and protection
- planning calving pastures
- moving cows and new calves
- working with nature
- education
- paradigms and resisting change

Managing the herd
- cow management
- calf management
- bull and breeding management

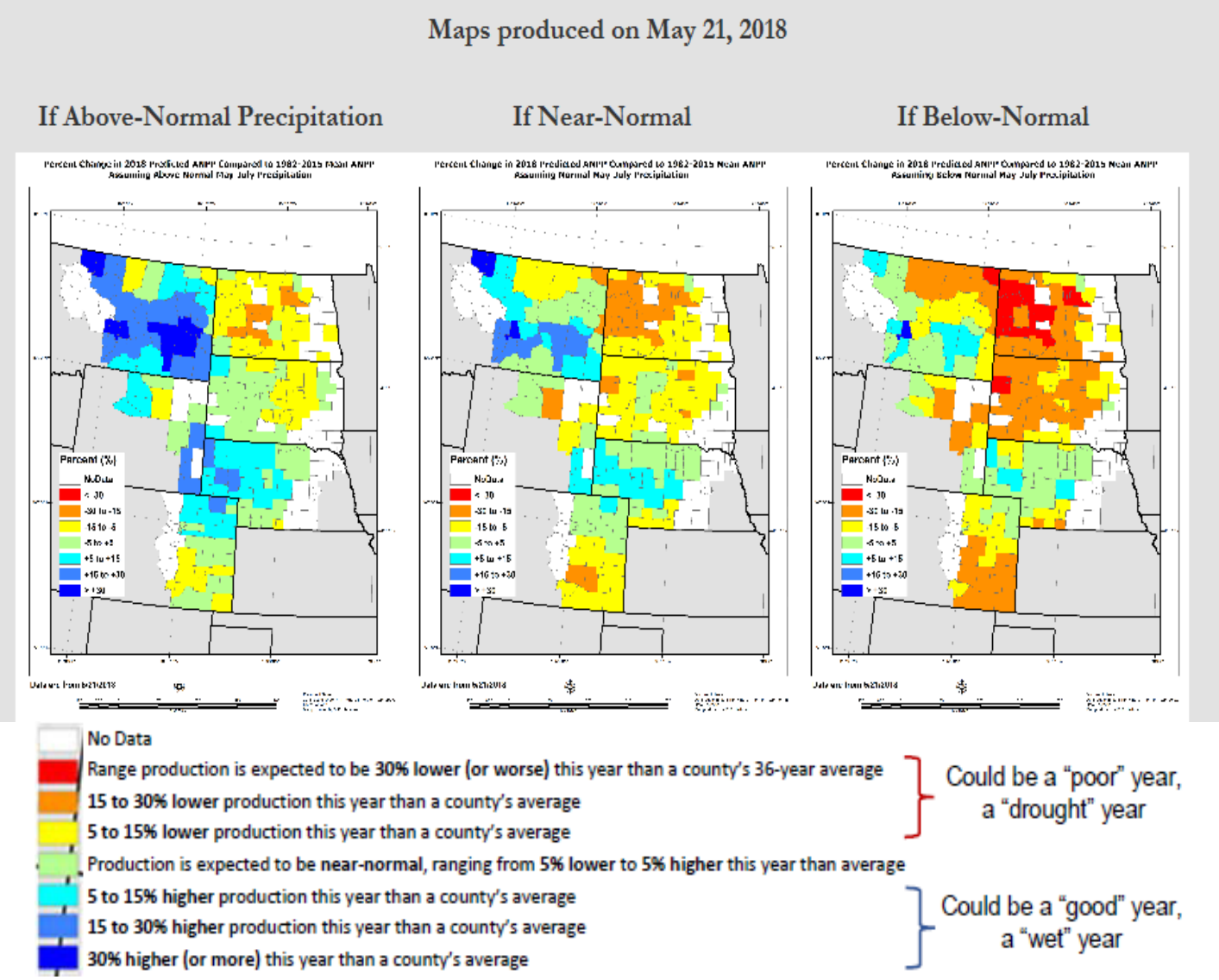
Assessing ranch resources
- evaluate
- forage and carrying capacity
- education
- paradigms & resisting change

Finance, profit and marketing
- reducing input costs
- know your product
- flexibility, options and opportunity
- paradigms and resisting change

People, relationships, and quality of life
- labor
- stress
- marriage
- family life and parenting
- passing it on
- paradigms and resisting change

Range 101 Continued by Sandy Smart

A nice feature on the website is the "Maps Archive" tab. Here you can see the previous predictions and compare them to the most current set of maps.



Drought preparedness starts with a plan. Having a reliable estimate of forage production is critical for making decisions. Grass-Cast can be used as one component in your drought plan. Overtime, like anything else, we should see improvements in forecasting. It would be a good idea to make notes of forage production on your own ranch so you have some benchmark to make comparisons. For more information on drought planning visit the National Drought Mitigation Center (http://drought.unl.edu/) or contact your local range extension field specialist.

COVID-19, Direct Sales, and Consumer Experience by Garnet Perman

The Covid-19 pandemic identified many problem areas in all of society. One year later, both state and federal government have initiated legislation to address those deficiencies. Of interest to Coalition members are the efforts designed to make direct sales from producers to consumer easier.

Both SD senators and Rep. Dusty Johnson are sponsoring legislation in the US Senate and House of Representatives that will change current regulations to allow more interstate meat sales. The DIRECT Act is in committee and would allow sales of state inspected meat across state lines via e-commerce only.

South Dakota is working toward membership in the Cooperative Interstate Shipment Program in which inspectors are trained through federal programs. Meat and poultry in member states are able to sell across state lines but not export to other countries. (All SD poultry is currently USDA inspected.)

While those efforts move along, a more immediate way to address shortages in meat processing as it relates to direct sales came through the SD Dept of Ag. According to Dr. Christina Bakker, SDSU Extension Meat Scientist Field Specialist, the proposal is a one-time $5 million grant program to help small processors make capital puchases that can help them meet state inspection guidelines. The program rolled out on March 18. Applications are due May 1. https://sdda.sd.gov/office-of-the-secretary/meatprocessinggrant.aspx.

Originally designed to move through the legislative process, Gov. Noem is instead using Covid-19 stimulus dollars to implement the program. While USDA, state inspected and custom exempt facilities are all eligible for grant money, the intent is to help small processers. The money is to be used for capital expenses like coolers and freezers, processing equipment, waste treatment systems and holding facilities.

Bakker said quite a number of custom exempt plants are looking at becoming state inspected plants. In addition to upgrading facilities, they also need a Hazard Analysis Critical Control Point plan, essentially a certified food safety plan which can be time consuming to complete. Currently 34 state-licensed meat establishments, 50 custom exempt and 18 federally-inspected plants do business in South Dakota.

Not only did Covid-19 show the need for more and improved small meat processing facilities in the state, consumer demand for locally raised meat has also accelerated. “There’s been a huge increase in conversations about direct marketing with both ranchers and consumers,” Bakker said. Millennial and Gen Z consumers increasingly want to have an experience with food. They want to know the back story about where and how it was raised. Producers who engage in regenerative practices are well situated to provide that information and positive experience.

Having experienced shortages in the past year, others are concerned about the food supply and don’t want to be caught short again. Consumers also prepared more meals during the pandemic resulting in more interest in trying new foods and new recipes. The ability to purchase federally or state inspected cuts of beef directly from a producer also appeals to consumers who can’t afford buying and processing or storing a quarter or more, or who are only interested in certain cuts.

Direct Sales Continued Page 5

Direct Sales Continued by Garnet Perman

In any case, direct sales of inspected meat give producers an opportunity to share a great tasting product and a message about the role cattle play in mitigating climate change. Consumer research shows a high degree of trust in producers, especially if a more personal relationship is present. This platform is an effective way to combat the plethora of misinformation about cattle harming the environment and encourage protection of grasslands.

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

Drought Planning: A Case Study by Dan Rasmussen

Pasture in Mellette County overgrazed for decades resulting in poor soil health (Photo: Dan Rasmussen).

Joshua Dukart, North Dakota Holistic Resource Management trainer, at a recent HRM school in Faith said "our ranching business should be designed to focus on identifying and pursuing opportunities. With whole ranch planning, ranches can be, `opportunity focused businesses`".

Lack of rain is not an opportunity but managing to keep the rain that falls on your land is. By comparing an overgrazed pasture to a pasture managed for soil health, it is possible to have a severe drought on one side of the road and an average year on the other.

Drought Planning Continued Page 6

Drought Planning Continued by Dan Rasmussen

South Dakota experiences drought one in four years. We cannot make it rain, but there are opportunities concerning drought. Effective rainfall is the amount of rainwater that actually infiltrates into the soil. The healthier the soil the more rainwater soaks in. The rainfall amount is immaterial if most of it runs off. The opportunity is keeping as much of the rainwater on the land as possible.

Here is a case study of two pastures managed differently near my home in Mellette County. Pasture one, (pictured) has been historically overgrazed by multiple leasers for decades. Pasture two is part of a summer rotation allowing for adequate litter to remain on the soil. Both pastures have similar soils and are across the road from each other. In 2017 both pastures received 9.5 total inches of rain.

Pasture one lowered its stocking rate by removing cattle early and had to defer the pasture the next year. I used the NRCS infiltration kit, timing a quart of water infiltrating in 14 minutes. In pasture two a quart of water disappeared in 90 seconds. A rain event would have similar results with water infiltration between the two pastures.

The stocking rate in pasture two did not change. 900 pounds of forage per acre remained after grazing. The following year, after grazing, pasture two left 1200 pounds of forage per acre to feed the soil. This is average for the pasture.

Grazing management determines what your effective rainfall will be. 90 seconds vrs. 14 minutes infiltration rates tells you over grazed pasture one did not have healthy soil. When I dug a hole in pasture one, the root ball fell easily apart. The roots were slick and had little soil clinging to them. In pasture two the root ball was held together by extensive root fibers. I had to work to pull it apart and the roots had many small filaments holding onto the soil. This is the result of leaving enough litter to feed the bugs in the soil and the reaction the plants have to livestock clipping their leaves and stems. Plants react to proper grazing by `root die off` which creates organic matter in the soil.

Creating a physical grazing plan and a drought plan are helpful tools in maintaining soil health and therefore keeping more rainfall in the pasture instead of the water leaving your property.

Creating drought resilient pastures can be done through managed grazing practices. These practices are taught at the grazing schools in Wall and Chamberlain every June and September. Education is one of the opportunities Joshua Dukart talks about at his HRM courses. In fact, Joshua will be a featured presentor at the West River Grazing School in Wall this year. Sign up early as the school fills up fast. To register call all Judge Jessop at 605 280-0127.

Dan Rasmussen is a third-generation cattle rancher living in south central South Dakota. Dan served on the board of the South Dakota Grassland Coalition for 18 years and is currently the education coordinator for the Grassland Coalition.

Calving Season Continued on Page 7

CORNER - *News from the SD Section of the Society for Range Management*

By: Matt Odden

How can the Society for Range Management help you?

I've encouraged many folks to join the Society for Range Management (SRM). When doing so a common and logical question I often get: What will I gain or how will joining help me?

Matt Odden, SD Section of SRM President. (Photo courtesy of Matt Odden).

I should have an answer to this question, especially since I'm currently serving as the President of the SD Section of SRM. I personally feel that I've gotten a great deal out of membership but how do I put this all into words and express it? Well, I'll give it a try.

The foundation for the Society for Range Management is built on science. There are many opportunities to learn from the science through scientific journals and other publications; workshops to attend (International, National, Regional, or local); networking opportunities; youth activities including learning opportunities, contests, and scholarships; recognition of outstanding range managers (our local farmers and ranchers) at the section and/or International level; as well as other opportunities I'm certainly forgetting. So, there are some talking points but maybe sharing my personal story will be something you can relate to.

How has SRM, specifically the SD Section, helped or had an impact on me? I grew up on a ranch in the center of SD. One year the Hand County Conservation District hosted Rangeland Days, which is put on by SD SRM. I was able to attend and I remember thinking it was cool to have this learning opportunity right in our back yard. I don't know that I did exceptionally well in the contest, but I learned some things about range and participated in the speaking contest.

This one opportunity sparked an interest in me and a few years later when I was in high school, I went to Range Camp held in Sturgis. There I learned more and got to spend more time learning about range as well as meeting some new friends, some of which are now my colleagues.

During college I eventually found my way to being a Range major and was a member of the SDSU Range Club. I attended the International meeting in Kansas City, which was a memorable event in my college career, as well as attended SD Section meetings.

Now as a professional, and some might say I'm using that term loosely, I've been active in SD Section activities and helped several times with the youth events that inspired me as a youth. These opportunities to give back have been special to me. A few years ago, I took my son to Rangeland Days in Wall. He loved it and the following week he asked if we were going back to Wall again. He was pretty bummed when I told him that was just a few day event and he'd have to wait until the next year.

Everyone gains different things from being active in different aspects of SRM Section activities. I've also found the networking to be extremely beneficial to me both personally and professionally. Getting to know other professionals and experts in the field provide great resources.

Whether you are a farmer or rancher, serving farmers and ranchers as a professional, a researcher, or simply a range enthusiast there is a place for you in the SD Section of SRM. So, give it some thought and join! Or give me a call to talk about it.

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Biostress, SDSU
Brookings, SD 57007

Calendar of Events

Event	Date	Location	Contact Person	Phone
NRCS State Technical Meeting	March 31	Online	Kathy Irving kathy.irving@usda.gov	605-352-1205

Please remit any comments, suggestions, or topics deemed necessary for further review to: Sandy Smart, SDSU Box 2140B, Brookings, SD 57007, alexander.smart@sdstate.edu, (605) 688-5503