## Keeping Cattle and Grass in Balance Season 1, Episode 57

[Intro music]

**Kiernan Brandt:**

Welcome to Cattle HQ, a podcast from industry experts and progressive producers discussing cutting edge info about the cow calf sector to keep cattlemen and women in the know and positively affect their bottom line.

**Madison Kovarna:**

Welcome to Cattle HQ brought to you by South Dakota State University Extension. I am Madison Kovarna, a Beef Nutrition Field Specialist based out of Watertown and joining me again today are two very special guests, Kaylee Wheeler and Dr. Krista Ehlert. Excuse me. Kaylee and Krista have been in the episodes on the podcast before but if you are new or need a refresh, Kaylee is a Range Field Specialist based out of the Winner Regional Center and Krista is an Assistant Professor and Extension Range Specialist based out of our Rapid City Regional Center. Both are my co-workers here at SDSU and I am very happy to have them joining me on this episode. We are going to have a conversation that follows up the last time they were on, focusing on the upcoming grazing season. Now that more information is available out there regarding weather outlooks and several other things that have updated what we talked about last time. I wanted to thank both of you for coming back on Cattle HQ. Always happy to have members of our range team on the airwaves to share their expertise with me and bring together the integration here of the range management as well as on the cattle side of things. Last time we talked, we focused on grazing following a dry fall and winter. While at that time we were hopeful that the faucet was going to turn on, it doesn't look like Mother Nature has followed that and hasn't really provided a whole lot of moisture for most of the state just yet. Do either of you have any weather outlook updates that have come across your desks or things that you can share with our listeners in regards to what maybe our late spring and early summer moisture is going to look like?

**Kaylee Wheeler:**

Yes, Madison. Thanks for having us on. Basically, drought conditions across South Dakota have persisted since late last summer. Through the fall and winter, we didn't have any significant winter or fall precipitation. In South Dakota, the vast majority of the state has received less than 50% of normal precip since the start of October, which is a really key time because we know that dormant precipitation helps us recharge our soil moisture and get ready for the spring green up. Now that we are in this situation and looking out towards spring, the outlooks are all showing below average seasonal precipitation chances and equal chances on temperature. Basically, the chances of receiving decent precipitation for the next three months, or at least above average, are pretty slim. Our warmer temperatures that we've seen so far are just continuing to deplete soil moisture in the meantime, which has been very nice for all of our spring calving producers out there to have nice weather, but it's not boding well for the coming summer. Essentially, we're seeing thawed soils at this point with warm temperatures and lack of precipitation, which is just further drying out the soil. Timing of the moisture that we do get this spring and summer is going to be really impactful on the length of our growing season.

**Madison Kovarna:**

With the green up you mentioned, the green up coming up, I've already looked out in my yard and with as little snow as we've had, you can already see the little green spring time showing up for us which has been nice, and is definitely helping with the winter sadness for me fade a little faster but that also impacts our itch to get cattle out on grass. It’s going to be really tempting to turn those livestock out sooner than maybe we should. Krista, do you have any recommendations or cautions for producers on utilizing that green up sooner than maybe we should or any thoughts on that?

**Dr. Krista Ehlert:**

Yes, I definitely have some suggestions for our producers across South Dakota, but also across the Northern Great Plains. A lot of our producers are familiar with the fact that South Dakota is fairly cool season dominated. Think of your introduced cool season grasses like crested wheatgrass, and smooth brome, and Kentucky Bluegrass. Then we also have our native cool season grasses and those will be species like western wheatgrass and green needlegrass. I know it is really tempting and you get this itch to turn cattle out when you start seeing green out on your pastures. Particularly when we haven't had enough soil moisture, those grasses are not going to be ready to be grazed for quite some time yet. If you look at growing degree days, you think of growing degree days as essentially in brief. This idea of how many days above freezing that we've had. Our introduced cool season grasses, Madison, they only need 400 growing degree days to reach the three, three and a half leaf stage to be ready to be grazed. If you contrast that with our native cool season grasses, they need three times as long to be ready to be grazed. They actually need approximately 1,200 growing degree days to reach about a four-leaf stage, which is when they're ready to be grazed. That is going to take some more time this year because we haven't had the soil moisture as Kaylee just mentioned. It has been warmer, which if that continues, it will help those species start to emerge up out of the ground. If you graze too early, particularly with the conditions that we're anticipating for the growing season, like Kaylee just went over, it's going to reduce forage production. You really could also be essentially causing problems down the line because you could negatively impact the plant community by allowing invasive grasses or weeds to become established. If you do have those introduced cool season pastures that are pretty dominated by Kentucky, crested, and smooth brome, they can be grazed at the three-leaf stage. If you do have those as part of your operation, hit those pastures before you go out onto your native ground. Just again, that native ground needs about three times as long to be ready to be grazed. The other thing to think about is if you go out too early this year, not only are you going to impact the forage production this year, but if it means - excuse me, but if it remains kind of dry, and then if we have another winter into the 2025, 2026 winter season, and we don't get enough soil moisture, then those pastures are really going to be hurting come the 2026 grazing season. Avoid itching the itch for now with turning your cattle out. Kaylee has some suggestions for how to extend out how you're feeding those animals that doesn't involve hitting your range too early or too long.

**Madison Kovarna:**

One thing that I wanted to mention, I think Kaylee mentioned this last time we talked. The moisture that we're going to be receiving in this April, May, and June time is really going to impact how long or even how soon our cows can be out on range. Kaylee, am I totally making those months up? Is that the recommendation of moisture levels of what we're looking for our grazing seasons?

**Kaylee Wheeler:**

Yes. April, May, and June is the most valuable precipitation that we get out of the entire year in the northern Great Plains. Like Krista mentioned, we're a more cool season plant dominated community. That rain and moisture that we get in April, May, and June is going to be responsible for roughly three quarters of the forage production biomass that we're going to get in a year. Just key takeaway, the rain that we get in May and June is much more valuable than rain that we would get in July or August.

**Madison Kovarna:**

Yes. That was one thing that I remembered from last time because for those of us in some parts of the state, we got that end of March, early April snowstorm that brought - at least here in Watertown, we got quite a bit of moisture that came down which had me pretty excited that it'll hang around, but it seems like it's melting and going away just as fast as it came. One other thing for you, Kaylee, is Krista mentioned that you had some resources in regards to what we can do to prevent cows going out on range or ways that we can maybe hang on to them at home a little longer. One of those resources, I guess, is an article titled Increasing Adaptability with Alternative Grazing Strategies. Could you maybe give us a brief overview of that article and some of the topics you covered and maybe the key takeaways if someone were to click on that and read that?

**Kaylee Wheeler:**

Yes, of course. I think just like Krista was talking about with waiting to turn out and avoiding the temptation of that new green grass. I think the thing about our agriculture producers is that they have to be adaptable and no two years are ever the same. We have to just go with what the situation is and try and make the best decision. This article is all about just discussing, becoming more adaptable in your operation, which is really important just for long term success and profitability because the more adaptable that your business is, the more resilient you'll be in the face of these very unpredictable climate and economic challenges. When we talk about ways to become more adaptable, anything that we can do to decrease our input costs and increase our options for management strategies, that's going to benefit us. Basically, we know that the greatest sum in most beef cattle operation budgets is simply just keeping those cows fed. The cost of keeping them fed further increases in the wintertime because we're mainly providing them harvested forages and supplementation and things like that. That’s going to also be really expensive when feed is on short supply. Anything that we can do as producers to just find creative ways to reduce those feed costs is going to help us through these harder times. That can mean a lot of different things for people but specifically looking to grazing strategies, some options would be, like Krista mentioned, those introduced invasive cool season grasses that are ready to be grazed a little sooner. You can targeted graze those specifically while they're green to be able to reap the nutritional benefits from them and then save your native pastures for later on. Anything rotational grazing-wise usually can increase your harvest efficiency, meaning you can take a little bit more off of those grasses. Also, some people that just stockpile their pastures to be able to be used later on in winter grazing or dormant grazing. Another huge component that increases our options on the grazing side is integrating livestock on cropland. We have a lot of opportunities here in South Dakota with having a lot of cattle and a lot of croplands in close proximity. Anything grazing cover crops in the spring for a few weeks. Grazing corn residue in the fall for a few weeks. The key is getting more grazing days. Even if cattle are able to graze on cropland for a few weeks or a month even, those are all days that you're not having to go physically provide harvested feed to that cow. You're making her do her own work to harvest her feed, which is really the key in being able to decrease those input costs on the feed side.

**Madison Kovarna:**

That's one thing that you brought up at the tail end there that is something really important. I wish that came across in a lot more cattle management strategies than maybe it does, is the fact that having those cows go out and work for those feeds rather than finding the ones that we bring out to them. We've kind of hit on it earlier. That's not me saying go throw them out on grass and make them figure it out when the grass isn't growing. That's not what we're recommending here. Utilizing those alternative sources such as crop residue, putting them out there on those harvested forages. This is something too that with potentially a dry year that impacts crop yields and with crop insurance and all that, that makes the situation a little fuzzier. In those crops that maybe don't yield enough that your cost analysis of getting the harvester out there, the combine, whatever that looks like, using that to feed cattle as well. Again, that's something to talk with your crop insurance guy to see if that fits in your contract. There's a lot of options and I really appreciate seeing that roll across the website as well. Just making sure that everybody knows that grazing cattle just isn't throwing them out on rangeland and bringing them home in the fall too.

**Kaylee Wheeler:**

Yes, and one more thought to add on to that is just thinking about your cow nutrient requirements. They fluctuate a lot throughout the year. They're going to be the highest about six to eight weeks after they calve when they're at their peak milk production. Those requirements can be lowest after weaning when we stop that lactation. For any cattle producers that can be out grazing an actively growing green cover crop right now and they're spring calving, that's going to be really good to be able to meet those cows’ nutrient requirements versus you think about in the fall when we wean our cows and they have really low requirements. We can throw them out on really low-quality forage like corn residue and they can put on body condition very quickly just with a little bit of grazing of that stuff.

**Madison Kovarna:**

One thing that’s staying in this mindset of grazing strategies and just being adaptable to conditions. We just mentioned that this early spring and early summer moisture is going to be pretty much the nail in the coffin of how this grazing season is going to go. Are there any other grazing methods or strategies out there to help us improve our lands to capture and utilize small amounts of moisture more effectively? I've heard a quote from a producer that when someone asks him how much rain they got, he just says, “All of it.” I think that's a unique way to think about it is he doesn't look at the actual tenths or inches of rain. It's just the fact of he knows all that moisture is going into his ground where the plants can utilize it. Krista, do you have any insight on some methods or strategies to allow more producers to think that way?

**Dr. Krista Ehlert:**

Yes. I really like that quote that you mentioned, Madison, and I've also heard that. Then something similar is a lot of guys will get an inch or two inches, let's say, of rain in one of those big precip events that we've been seeing as a trend the last couple of years. They mentioned that, “Oh, my stock pond or stock dam filled up,” and that is a good thing. If you get all that rain and the stock pond or dam doesn't fill up, that is actually almost better because that means the water is actually infiltrating into your rangeland, where it can be then used by the plants to grow and then perform photosynthesis and produce more forage and so on. Grazing, soil health, rangeland health, they're all pretty intricately related. One of the things that Kaylee and I really like to advocate with the producers that we work with is really starting to think about your range management but also your operation from the ground on up so from the soil up. There are soil health principles that a lot of producers are familiar with. They can really help with your grazing strategies and also helping your operation actually capture any little bit of moisture that comes our way. One of them is we talk about soil armor. That really means keeping the soil covered after a grazing event. “Soil armor,” some people will describe it as plant litter or dead plant material. You can also refer to it as “detritus.” That soil armor helps protect the soil and reduce erosion. It provides an insulating layer to the herd beneath our feet, the little soil microbes, the protozoa, the amoebas, the fungi, right? It's really important because it protects the soil but it also feeds the soil. One thing also to think about, Madison, with having that soil armor layer is as a raindrop falls from the sky and hits the ground, if that soil armor is present, it allows that raindrop to go boing, boing, boing, and gently fall into the soil profile and infiltrate. Versus if there's no soil armor, it is just a sledgehammer coming down and hitting that top of the soil surface. Then on a microscopic level, you can actually see this happen. All these soil particles basically bounce up and out. Again, you're having some soil erosion with that. Having soil armor in place is really important. Keely and I also heavily advocate for our producers to think about leaving a living shield behind after a grazing event. The “living shield” is really that standing plant material that's left behind after a grazing event. How many leaves are you leaving? How much photosynthetic capability are you leaving on that plant after you graze? That living shield, again, it helps shade the soil from extreme temperatures. Again, you're reducing evaporation and water loss that way. That green leaf material also helps intercept raindrops. Then they aren't so aggressive when they hit that bare soil. Also, that living shield helps slow wind coming across the surface, which of course can increase drying and also exacerbate wind erosion. Plants simply cannot perform photosynthesis, recover from grazing, or produce additional biomass if you don't leave behind a living shield. Everyone loves to talk about the white knight coming in on his steed and saving the day. We really need our producers to, again, protect their soil armor and utilize a living shield on their operations. There are other strategies, of course, and soil health principles, but those are two, Madison, that are especially poignant to bring up at this point in the game as we head towards turnout and this grazing season.

**Madison Kovarna:**

One of the other things that fits into leaving some standing forage behind, I mean, it's tempting to go out there and just say, “Well, if I take it all, that's more than my cows can eat.” Also, the land is our resource and we need to take care of it. I've seen some pictures that you guys on the range team have released in articles and other things where there were two sides to a pasture. One had standing forage, some standing grass left over, and one was pretty much taken down to the dirt. Maybe an inch or two of actual grass left standing. Someone went out and took a picture following a snow and you could just see how much snow that standing forage was able to capture and hold down into that soil where it can then, as it warms up, can melt down rather than making drifts miles away where maybe that moisture isn't necessarily going to do the most work. I think, too, that fits nicely into the leaving some stuff behind. Like you mentioned, it not only protects the soil itself and provides those plants energy to come back but also it can act like that little net to hold everything down and keep everything in place. I forget where that picture was or where I've seen it, but I'm 95% sure it came from one of you guys somewhere, someplace.

**Dr. Krista Ehlert:**

I think Kaylee took it.

**Kaylee Wheeler:**

Yes, it's on my winter range report article on the SDSU Extension website.

**Madison Kovarna:**

I was going to say Kaylee, but then I was like, if I'm wrong, this might become a cross. If it's Krista’s, [Laughter] I don't need to limit you guys' work coming together. [Laughter] I just knew it came from someone and it's a pretty cool picture. If anybody wants to see that, too, go check out that article that Kaylee just mentioned of that winter pasture report, I think, it’s what she titled it. Moving out of the grass management vein and back into the cattle conversation, if anybody's been watching or especially those who have been involved in the cattle industry the last couple of years and even more so this past cycle, our cattle inventory numbers are at historic lows. The herds across the nation are continuing to cull and it doesn't really look like rebuilding is going to happen in the near future. If it is, it's still up in the air of when and how that's going to happen. Are there ways that producers can alter their grazing plans or strategies without carving out more of the cow herd? I mean, we're already operating at pretty small numbers. Is there may be a trigger point where additional culling comes into the conversation? I know Kaylee and I have talked about this just hand in hand on some other things. Kaylee, I'll pick your brain first on that question there.

**Kaylee Wheeler:**

Yes, I think when we're talking about this question of do we need to get rid of cows or not? It always comes back to the balance of your forage supply and demand. That means, if you have too much demand, aka too many cows, and not enough supply or not enough forage or feed resources to feed them, you have two options. You either need to reduce your demand or increase your supply. Obviously, nobody wants to get rid of their cows. If we cannot figure out a way to increase our feed supply, whether that's through alternative grazing strategies, like Krista and I talked about a little earlier, or if that's purchasing feed, then we kind of move into that conversation of the reality of culling. As you mentioned, Madison, the cattle markets have been pretty good these last couple years and they're still high. If there are ways that you can take advantage of these high markets right now, maybe it's not your cows, maybe it's calves or some other herd that you have. You can take advantage of that now instead of waiting too long for prices to fall. That could be a good option. Really, I think the key is that if people want to avoid deep culling right now, they need to be planning ahead. Proactive management is the key right now. Before we've even started the grazing season, you should be planning now for the potential reality that we're going to have to pull cattle off pasture sooner. You better be planning for an alternative feed or grazing resource this fall. You should be planning on weaning and preg checking sooner than normal to maybe get some of those open cows and those cull cows off the ranch earlier because we don't want to be feeding her if she's not being a productive part of the business. Weaning is a really good strategy because that's going to reduce your cow nutrient demand by at least a third just by stopping that lactation. When we no longer have to put all these nutrients towards the energy of her producing milk. We reduce her demand and we can save a lot of grazing days by doing that, just by weaning early. Those are some things to think about.

**Madison Kovarna:**

The thing too that fits hand-in-hand with that is, we mentioned - you mentioned, I suppose I should say, the preg checking earlier to catch those open cows and they're not contributing. They're being the - what do you call them? The parasites almost. They're chewing up some more of your resources that at this point doesn't look like we have a lot extra to give. One of the things on the repro side of the equation that goes hand with hand with that is if we look at calving distribution, those females who breed on that first cycle or calve in that first 21 days on time, those are going to be your females that have some increased longevity in the herd. Those are your highly fertile females and the ones that honestly make the job easy and fun. The ones who do the job like they're supposed to. If we're going to be preg checking earlier, inadvertently it allows you to select for those females that are going to be able to stick around a little longer and give you those uniform calf crops of their calving closer together. Those calves go to the sale barn closer in size are really applicable to those buyers, they're in high demand too. That works in that equation too of you are doing it for your range management but also can definitely be a blessing in disguise in terms of making your cow herd more productive.

**Kaylee Wheeler:**

I was going to say that I think that's a really key mindset as well when we're going through these more difficult times is to look for the opportunities within the challenge. Maybe your challenge is that you're forced to be a little more strategic with your cow herd. Then as you mentioned, the opportunity is that maybe you get to tighten up your breeding window or you get to keep the cows that you really like around and go more with those genetics and things like that. It's just shifting your mindset to look at it in a positive light and look towards some of those opportunities that you maybe wouldn't pursue unless we were going through these hard times.

Madison Kovarna: Exactly. Couldn't have said it better myself. We’re nearing the end of our time together, sadly. This is a conversation that I always like having how we can integrate both sides of the conversation together and not only impact our lands in a positive way but also work with that into our cattle management as well. I will open the floor to either of you if you have any closing comments or things that maybe just sparked as we were conversating. Anything like that. I’ll leave the floor to either of you if you have any closing thoughts you want to share with us.

**Dr. Krista Ehlert:**

I think I would just add, Madisson, and Kaylee just brought up is thinking about the opportunity costs, but also the hidden opportunities. The producers that I've worked with and that we've all worked with that are able to make it through a lot of these challenges that producers face every day, whether it's drought or flooding or poor breed up or what have you, is because they can see their operation and think about it as a system. They’re also able to identify and act adaptively to whatever challenge comes their way and being nimble. Being able to pivot makes them have an edge over the guys that just sit back and take things as they come and wait to see what the potential fallout of anything is going to be. Again, really encourage producers to think outside the box, get creative, use the resources that you have at your disposal, whether that's extension or NRCS or another trusted organization that you like working with, but also certainly pick the minds of producers that you admire and respect. Whether it's someone that's been in the game for 50 years or a producer that's just getting started and doesn't quite have a lot to lose. Sometimes those guys really, they're scrappy, they make it work. Find your network and use them. Call Kaylee and I if you have any questions. Have a great grazing season.

**Madison Kovarna:**

I want to thank Kaylee and Krista for joining me on the podcast. While we patiently or rather impatiently wait for nature's faucet to turn on, maintaining awareness of shifting conditions is going to have all of us tuning into the local weather forecast and long-term outlooks a little closer as the grazing season gets closer and closer and as green up is definitely on the way. I hope our listeners will take advantage of the information you've shared with us and utilize it on their operations or in their daily life. Definitely check out the resources that Krista and Kaylee are putting out on the website as well to stay in tune with things that we can be doing. This has been Cattle HQ brought to you by SDSU Extension, headquarters for all things beef cattle. Visit extension.sdstate.edu for the latest beef information or to check in on the articles that we mentioned today during this episode. For now, we're going to be hitting the trail, but be sure to steer clear of trouble and keep grazing for greatness.

**Kiernan Brandt:**

Thank you for tuning into this episode of Cattle HQ. Brought to you by SDSU Extension, headquarters for all things beef. We invite you to visit extension.sdstate.edu for the latest beef information as well as subscribe to the show on Spotify. You will also find show notes and resources from today’s episode, until next time. Remember, success is not a goal, it’s a byproduct.

[Outro music]