## Opportunities and Considerations when Grazing Cover Crops

## Season 1, Episode 24

Male: 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.

Interviewer: Welcome to Cattle HQ, brought to you by South Dakota State University Extension. I am Robin Salverson, cow/calf field specialist based out of Lemmon, and a familiar voice of Olivia Amundson, our cow/calf specialist in Sioux Falls, will be my cohost for this episode. Joining us as our guest is Dan Forgey. He is with Cronin Farms near Gettysburg, South Dakota, and we’re excited to have Dan on this episode at Cattle HQ to give his perspective of using cover crops on their operation, especially for the use of grazing. So, welcome, Dan. We’re glad to have you here. Could you just share a little bit more about yourself and the operation that you’re on there at Gettysburg?

Respondent: Sure. I’ve been with Cronin Farms for - you could tell my age - 52 years. We’ve had cattle; they run the summer on a native pasture along the Missouri River, but what really we found out is when we bring them home, if we have some covers for them to graze in the wintertime, usually graze most covers – we usually start about the first of November. Then we try to graze, and it’s worked out very well because we’re finding out that you’re cycling the nutrients through the cattle. So, there’s really a plus between the manure and the urine. I mean, you’re giving a lot back.

Interviewer: Where did you guys there at Cronin start utilizing cover crops? I know you started utilizing it probably well before in the farming side of things and helping to benefit the soil profile, but did you start grazing right away when you started incorporating cover crops or did you guys wait a little bit?

Respondent: We waited a little bit. We started the covers in 2015. We waited because we didn’t understand covers. We had an agreement with a SARE grant, and Shannon Osborne from ARS and Dwayne Beck from Dakota Lake Research firm helped me with that. The main reason of what we’re trying to do, we’re a single species. We have a really big test plot. It was 37 acres and we really have plenty of study, but we were trying to find out the benefit of the ground and it took us probably - in 2017, we started grazing covers.

Interviewer: So, in 2017 is when you started grazing. With that, what are some of those lessons that you’ve learned in regards to grazing cover crops? I know, Olivia, you had the question when we were having a conversation prior to this podcast interview about specie varieties and whatnot? Olivia, make sure you share some of your thoughts there, too, on what you had questions.

Interviewer: Yes. I find cover crops so intriguing, and I feel like the more I learn, the more questions I have. When you incorporate cover crops, you have that benefit of that soil health aspect, and I think more and more people are becoming interested in how can we incorporate livestock onto these cover crops and use it as an additional feeds. Especially in a year where we’re seeing less amounts of rain than we typically do and pastureland is getting – we’re only able to utilize it for a shorter period of time. Just being able to incorporate these cover crops and really retain some of that soil moisture. I mean, like I said every time I learn something new, there’s something else that pops up and I feel like I have 10 more questions.

Yes. I guess my first question like Robin kind of alluded to is how did you hammer in or decide that perfect cover crop mix for grazing your cattle?

Respondent: Olivia, I don’t know if there is a perfect mix, but I think everybody has to be a little bit different, but when we had a full-season graze one time, what we did was we took a quarter section and it was double the year before. We planted the full-season cover because at that time what I wanted to do was I wanted to – we knew what it cost us to feed to the yard, and I wanted to take that in the middle of December and graze our cattle and paddocks. Getting back to the mix, so what I’ll do is I’ll look for a mix. I want one that is high in carbon. Everything I put in the mix, there’s a reason for it. It’s just like, for instance, I had buckwheat because it enhances the phosphorous. I had flax because it benefits my mycorrhizae fungi. I think as we go on with that, that’s very important to have the mycorrhizae fungi in the mix.

I had BMR sorghum, a BMR corn, BMR [Unintelligible] sorghum. Then they have forage peas and then rape and kale. There a few of those things I’ve taken out because they seem to come back involuntarily and little harder to control the next year. I really like kale and collards, but kale, my wife could go out and feed it to me, not that I like it. [Laughter] I mean, the thing that bothered me is that they grow way into the end of the winter. They don’t mind the frost. When you’re grazing in December, there are still some green kale out there. What I was trying to do was I was trying to do a lot of products that are mycorrhizae-friendly. I don’t mean to keep saying that, but I think that’s very important for building the soil. When I pick my mix, it wasn’t only to feed the cattle, but it was to feed the soil. I’ve got a pretty, I don’t know, not a difficult mix, but a pretty heavy mix. I want a lot of species, and it worked this time. To do it over again, I don’t know if I’d quite use that many species because I don’t think you have to. I have some cow feces and stuff in here, but I wanted protein. It was 19.8 - excuse me, $19.80 for my mix. At that time, I thought it was alright, but I think right now I think we could take $4.00 or $5.00 off that really easy.

Interviewer: Dan, I have a lot of questions, and I’m hoping I kind of make this a smooth transition. You talked a little about grazing and paddocks. Can you tell us? You put this cover crop in and, obviously, there are multiple benefits. Then how do you go about grazing these paddocks?

Respondent: A very good question, Olivia. What we did is - and I think this is really important. I sent a biomass. I took a yard square and sent it into work lab because I thought if we’re going to do this right, we have to know how much nutrients we have. I think that’s really important. Out of this, the biomass sample, November 18th after a frost, we had 11% crude protein, and that really helped a lot in the decision. Then it was relative feed value of 88 and a forage quality of 131. I thought that really helped us set up the plan. So, then what we did is I went thorough and I set up – we had so many cows on this paddock. It’s a quarter section and we had hot wire that we had crossways through it. What we do is we’d take the temperature of the day and the wind chill and everything and how many pounds of feed them cattle needed. Some of them paddocks with a number ahead we had in there, it might be seven days and then if it got really cold we might shorten that up because we knew they don’t need anything. I think the really important thing as far as soil health that things go along with this because I think that we really have to leave some residue. We tried to leave 30% and we probably didn’t get that done. We left 20%, but we knew exactly how many pounds we had in the field and we knew exactly how much we wanted to feed a day.

Interviewer: So, then, Dan, my next question is, you obviously figured out the stock and density based on the amount of forage per paddock. As you move them through the paddocks then, were you able to see any regrowth on some of those and then regraze those areas or were those paddocks done?

Respondent: As I said before, we started grazing the 7th of December so there was no regrowth. We really watched them. We really managed this. Then the one thing I want to add, too, is we had a quite a bit of snow. A lot of people said, “Well, you want to put them in a slot because - the cover crops in a slot because they can dig them out of the snow.” These cows dug these out of the snow. They dug everything out of the snow because when we had quite a bit snow that year, when we ended in that paddock, come spring they’ve eaten and everything. There’s 25% of the residue, and the 30% of the residue just like when we first started with very little snow.

Interviewer: I think that is such a – what you just said that it’s really important that the cows need to work us versus us working for them and putting more fossil fuel, diesel, whatever it is to feed them. You’re making them work for us. I think that’s a big benefit. I always think that a lot about just winter grazing in general and everybody thinks, “Oh, there’s snow out there. We got to start feeding,” and in reality they can’t get down to the ground and get to that snow and down to that ground and start grazing those whether it’s cover crops or grass or whatever they might be on. So, I guess – I’m sorry, Olivia, if you had another question. [Laughter] I am always like, “Oh, man. I have so many questions.” [Laughter]

Interviewer: I know there are so many questions.

Interviewer: Yes.

Interviewer: Yes. Go ahead, Robin.

Interviewer: Yes. My question is, as you mentioned, cows. Have you guys put like wean cows out on these cover crops or like your replacement heifer calves? Can you share a little bit about that if you guys do do that?

Respondent: Sure. A lot of times our replacement heifers - if we’re capable of doing that. Right now, we’re reaching out and putting our cattle in places farther away from the farm, but we usually have some on a replacement heifers for if we have a field that’s gone to when we plan to cover on it then they’ll graze that. We’ve got one old paddock. It’s about 40 acres. Every year, it gets a graze from the heifers. Then as far as weaning, the boys - because the boys do most of the work, I mean, as far as – because it’s a young man’s job. Anyway, when they’ve been pastured we weaned for like six or seven years. Then one year, we’re able to do it. We had one pivot that was planted; field peas. We planned to cover in there.

We put everything in there and then cows taught the calves how to graze and everything. I really think that’s really important that someone teaches them how. Then we took the cows out and the calves didn’t know anything happened to them. They stayed on that cover and that was a pretty simple cover. There were some oats and there were some of forage of like - there’s some kale. There’s some turnip. That’s one thing. When you get to plant it in the fall, like you forage sorghums and stuff, they don’t have enough growth time because they realize that it’s time shutting them down. That’s one thing about oats. Oats is really silly on that deal because oats don't know winter’s coming. They just keep growing till the bitter end. That’s why one reason why I like oats in the mix. Then, again, no matter whatever mix – here comes that mycorrhizae again. No matter what mix I have, there’ll be flax in it. A little bit of flax because flax is mycorrhizae-friendly and enhances the phosphorous.

Interviewer: So, what are some of the species that are mycorrhizae - I apologize that it’s not coming out very well out of my mouth [Laughter], friendly? What are some other species? You mentioned flax. What are some of the others?

Respondent: Flax is good. Oats is good. You kind of got me on the spot there, Robin, but that’s okay because I think that like everything – I’m going to go back to my list here just to – okay. The sorghum is mycorrhizae. The corn is BMR brown midrib. It’s a grazing corn. If you plant something like in the 1st of July, and it’ll grow tiny ears on. Cows really love it, the [[Unintelligible]](http://recordings.civi.com/cgi-bin/player.php?file=Cattle%20HQ%20Episode%2024.mp3&starttime=832&duration=20) silage. Anyway, just the best resource to do, what I would do if I was looking for it is go to one of the NRCS charts and see what’s mycorrhizae, and that’s what I did. I spent a lot of time building my ration, and I still do. I’ve got a spreadsheet I have where I could go and see what I look for in Excel and dropdown and then the pounds and the cost.

One thing I want to say on this is a lot of times a person tends to overseed. You think you need a lot of seed. What I’ll do is I’ll do that percentage. If I’ve got three products, I’ll have the total add up to 100%. If oats seeding rate is 70 pounds, then I’ll do 30% of that so it’s 21 pounds. No matter how many species, I’ll have it come up to 100%. If you really feel bold, if you’re in more moisture, if you feel really good about what you’re doing, you can increase that percent to 110 or 115. I’ve made more mistakes overseeding. We always think you need more and you don’t. One other thing about grazing these covers, what I really like is everybody’s fear of prussic acid even in the summertime. One thing about it, you have a lot of diversified mix just like right now. It’s surprising sunflower is a mycorrhizae. One thing about a sunflower, the seed is really cheap because you don’t need – less expensive. Just don’t say cheap. You could go on, and you could put half a pound of flowers and so on, and believe it or not, the cattle like sunflowers. They really do. That’s good for the soil, but there’s a whole mixture. They’ve got their choice. I just think that what we think they should go for right away, they usually don’t. I mean, they’ll go out and pick them out. They eat some forage and they’ll go down low and need some kale and on and on and on, and the first thing you know - and if there are species in there that aren’t really what cattle like. That’s okay because the cattle might not like it, but the soil likes the diversity.

Interviewer: I think just a little bit of a plug here. You got talking about flaxseed. Bringing in some of Robin and I’s reproductive physiology knowledge, flaxseed has a lot of good omegas in it that are really beneficial for the cows and maybe your replacement heifers, getting them ready for pre-breeding. It’s kind of being able to kill two birds with one stone. You’ve got those flax omega barrels out there which I hate to say it get more and more expensive every year, but you could probably go out and seed some flaxseed and get some of that added benefit in a little bit of a less expensive way. I think that’s kind of cool. I’ll probably just backtrack quick. I was just writing some notes as you were talking, but you did mention something on fertilizer as well.

Respondent: Right.

Interviewer: Have you guys, since you’ve been putting in cover crops, have you seen less of a need for fertilizer or how has that been working for you guys?

Respondent: I think if you graze it, it will help with the fertilizer because when you graze it like we talked earlier when a cow eats something, 80% goes through her, and then it retains 20%. Some of that is available, what’s going through her, but I think if you’ve just got straight cover crops, you don’t see that benefit. You might see it a year and a-half later, but no one’s really proved yet and I know [[Andy Bryce]](http://recordings.civi.com/cgi-bin/player.php?file=Cattle%20HQ%20Episode%2024.mp3&starttime=1064&duration=20) is working on it to find out where that cover crop - so I’ve done a lot of work on this. We have straight cover crops, and a soil sample that - before we plant the cover crops and I soil sample after we plant the cover crops. It only used about 35 pounds or 40 pounds of nitrogen. Some guys say that cover crop will give it back to you, but when does it give it back to you? That’s why the price - and right now that’s something a guy has to be realistic and talk about. That’s why it’s so important. If you’re going to plant a cover, if you can graze it, then you’re getting some benefit back by having the cattle on the land.

Interviewer: Absolutely. So you guys graze it in the fall/wintertime. Then in the spring, do you guys ever harvest it for forage? Are you able to do that prior to maybe some replanting or how do you utilize that?

Respondent: The one thing if a guy is going to – no, we don’t because we’re really sticklers on leaving residue which has really helped in this dry spell. We’re like everybody. I mean we’re 3.5 inches below normal early this year, but one thing you guys, and I think for anybody that’s grazing cattle or raising cattle, is if you plant a three-way cross of sudangrass, have a brown midrib of pearl millet and a piper sudangrass, and then you go and you cut that off early, you don’t let it head out is what I’m saying. You’re still going to get quite a few tons out of it. Let it get shoulder high and you cut it 6 inches tall. We’ve been doing that for five years now, no matter how dry it is, the rest of that immediately go down and starts to pillar.

Most of the time we get that fall graze that’s about the waist-high for fall graze. We have our yearling heifers on that this year, our replacement heifers, and it did really good. We’ve planted to colleges. We test plant on it and it mellows the soils good, whatever, but just the deal for reference for you guys on the Cover Crop Profitability, Third Edition of the SARE, read about that on sudangrass because that’s really interesting. The nice thing about the blend, I never like to plant anything alone as the piper has got a really fine stem to it. They’re very palatable. Then the pearl millets and all this millet you can get, it doesn't have very much prussic acid in it. Then the brown midrib is they’re little better on prussic acid. That’s why I always like a mix in it because – and it does better. Everybody wants to be friends. We just don’t let them be friends by planting single species.

Interviewer: Oh, gosh. I just lost my train of thought. Go ahead, Robin. Oh, I lost it.

Respondent: I’m glad I’m not the only one. [Laughter]

Interviewer: It’s a good question, too. I’m like, “Shoot.”

Interviewer: It always comes back to Olivia so we know she’ll be able to bring it back. [Laugher] She’s got the youngest mind on this podcast right now so it will come back. [Laughter]

Interviewer: Well, I hope, but…

Interviewer: You had mentioned prussic acid. Do you ever see, and you hadn’t really – you know that is a concern with some of these various cover crop species. Have you ever seen an issue with nitrates? I know in the past, I’ve worked with producers that had planted cover crops and had sulfate issues in their prussic. Have you seen any of those issues or how did you manage through some of those so you haven’t had that issue maybe, or if you have?

Respondent: I think the diversity of your cover crop will help that. We’re very concerned on prussic acid so we’ll get everything tested. So far, we’ve been pretty lucky, but as I say this last year, we never planted any covers because we were way too dry. I mean, when it’s dry, we – what we’re doing right now is we’re just protecting ourselves, kind of rolling up in a ball till we start getting moisture, because on our farm I know how important cover crops are to bring carbon in for soil health, but we still need moisture for our crops. We’ve just pulled back from covers last year, and I don’t know. If it doesn't change, we probably will again this year.

Interviewer: So, that’s always a concern or a question is when do you not do it and when do you it. You wait so long. “We’re going to get moisture. Do I pull the trigger? Or “Are we going to get moisture? Should I pull that trigger?” I know one of the gentlemen I’ve worked with in the past, he’s like, “Finally, I just started sometimes pulling the trigger not knowing if we’re going to get moisture because you got to either do it or not do it.”

Respondent: You know, Robin, I pay a lot of attention and I think everybody should as to how much moisture you have in your profile. I’ve got a rod that they use to locate at tiles, drain tiles with, though it is a ball probe, and it’s four-foot. So, I go and find out how much moisture we have. I understand if you got a four-foot of profile, you can give up that inch-and-a-half of rain to covers, but if you don’t, if you want to go down a foot which we were in some places last year, it’s awfully hard to let the covers take that moisture. A lot of guys might think different ways, but I think that they’re finding that out a lot at Dakota Lakes, and I think Jason Miller is finding that out, too. There’s time for covers and there’s time to pull back. When it’s dry and a drought, I think it’s a pull-back time.

Interviewer: So, what you just said then basically if you have less than a foot of moisture, you pull back.

Respondent: Yes.

Interviewer: Maybe anything a bit more than that, you are considering putting in cover crops.

Respondent: Correct. On our average years, our average through the whole year is 18 inches, and sometimes you get to 19. If we’re less than that, if we’re down to where you only get 6, 7 inches of rain or moisture in the growing season, it’s just hard not because you’re so worried about your cash crop because I realize how important it is to build soil health, but it’s also important to have the profit and the crop to keep the farm going.

Interviewer: Honestly, Dan, that was going to be my question. I was going to ask, “We’ll what about the soil health?” So, we’re pulling back now. I mean, are we affecting that soil health by pulling those cover crops off? I mean are we eventually going to be going backwards? I don’t know. It’s one of those, not that it’s a million-dollar question, but it gets my brain moving. Yes. How do we make this all work?

Respondent: Well, Olivia, the way I look at it is you need moisture to do the mineralization. You need moisture to help grow organic matter. I don’t feel like we’re losing soil health because in our - we have a pretty fair-sized operation. If we’re going to have covers, it’s going to be behind one of which. So, basically we only get covers in here every four years anyway. We’re not one of these guys that’s just a really small and micromanaged stuff. We’re spread out a long ways. I think that in our no-till environment, we’ve gained a lot more soil health. I think the cover crops are helping us because we had a lot of soil health than we started by using diversified rotations, and then when we put covers in I think that’s just another step. Our checkbook is what we produced on our cereal grains, with our corn and soy beans, and then cattle grazing and covers, that’s just a bonus.

Olivia, I don’t feel that we’re going backwards. I mean, some people might think if you talk – but we’re not like some of the guys like a Gabe Brown where he so intensely managed stuff, but I’m never going to - I asked Gabe one time. I said, “Well, what do we do? How do we get to be like you are?” He said, “Well, you guys are big enough.” He said, “I micromanage it.” He’s talking about 1,500 acres. We just do the best we can. I think most producers are that way. I think a lot of people, if you go push the envelope and try to do a lot of these things and run out of moisture, in a dry environment, I think it’s going to hurt you.

Interviewer: I think that’s the reality of it, Dan and so I really appreciate that answer because I think the more people start incorporating cover crops and really start thinking grazing their livestock, I think we have to be realistic on the fact that it might not work every year. We always have to be able to have that, I don’t know if we want to say a plan B, but we got to be thinking about how those cattle are going to be fed. We’ve got to do what’s going to work for the operation. I just like the reality of what you guys have to do to make it work while trying to work on that soil health. Yes. I appreciate that answer.

Respondent: One other thing I’d like to comment on is we had a young producer east of us about almost 70 miles. He got in on this during the wet years and just thought bulletproof, and he went to plant it about every acre with covers, whatever, and it worked all right that first year. Then he ran into a dry year and it really cost him. All I want to say a little bit is when you’re doing something, kind of start on a small scale because this soil health deal, we’ve been no-till for 30 years. So, this soil health deal isn’t just going to happen overnight. Just be thinking in the long-term how you’re going to help your kids and your grandkids with it because I think that’s really important.

Interviewer: Dan, I think you just said or you just made a comment here like, “Think long-term.” So, I guess another question for you is how many years would it take before you saw this cover crop being profitable for the operation? Because I have listened to a lot of different presentations on utilizing cover crops and a lot of times they say, “Year one is probably going to be the hardest, and you might not see a whole lot of profit out of cover crops.” So, it takes repetition, consistency and doing it year after year. Do you agree with that statement?

Respondent: Yes, I do, but see another thing, Olivia. I want to point out that when we started, we already had really healthy soil where we’re going. It’s not really a fair question. The young man east of us, he did not. I mean, when they no-tilled, they’ve saved all their planted beans, and then they had worked the corn ground or whatever. So you have to have that nitrogen. You have to have that soil kind of left alone and ready for this. The only way I can put dollars on this is when we graze that 160 acres. That were how do measure the soil health? We had Lance Gunderson and Jim Miller from Redfield, Jason Miller, Dr. Beck, everybody in Redfield and nobody could really – that’s an answer that we’re still looking for, we’re still searching. Olivia, just like everything we do is we need numbers. We need numbers. I’ve got how many days we grazed on that one piece, but we need numbers, and that’s how we’re going to convince people to really do this because a person just gets in front of you and says, “Oh, it worked. It got to work. It’s the greatest thing ever.” They say, “Well, what are costs? What would it do? What would it do?” They are hard numbers to put together.

Interviewer: I would agree with that. Those are hard numbers to put together and a lot of times I don’t have those numbers for you guys.

Respondent: Yes.

Interviewer: I definitely agree with that.

Interviewer: I guess I have a question for you. Cover crops have been a more common site through North Central South Dakota down to through the river, right? I mean, it seems that’s probably where it all got started in South Dakota, to tell you the truth, because you guys have been very progressive in soil health and building soil health. Then I have producers asking, “Well, can we grow them in Western South Dakota where we are a bit drier?” We’re usually more that 12 to 14 inches of moisture because it’s not as common practice out here. It’s becoming more common, but some people still are uncertain that they can incorporate them. What are your thoughts on that?

Respondent: Robin, I think what we got to go back to is knowing your soil type and how much water you can hold. You can do that wet soil survey, and you can find out how much water you can hold in the top four-foot. I think you have to go on with that. Are they going to be able to do what we do? If someone comes to our place to plant the cover that I do, and if they go 60 miles west to here, west of the river, they’re going run into trouble – so, because they’re primer soils and whatever. So, I think that’s one way that I think that would be a good way to research that is if you could have somebody either apply for a SARE grant or have the college set up some test plot or the Soil Health Coalition. You’ve got a very good one in Rapid City with Shawn and then Dave Olilla, he’s with Soil Health Coalition. Encourage them to set up some plots up there on some of that tougher ground and just see what you can do. I know there’s Brett Ireland down in Martin, he’s been doing some. I don’t know. He’s at higher elevation, but I think them very good questions. I think to find out what you can do in that region, I think them questions have to be answered. I’m not the one that’s going to because I know what we can do here. So, that’s how I feel anyway.

Interviewer: I think you provided a very, very important point is understanding what our capacity is here and figuring that out by testing instead of just wondering.

Respondent: Yes.

Interviewer: “Can I do it or can I not do it? Well, let’s do some testing to figure that out,” versus saying, “We can’t or I’m just going to try.”

Respondent: Robin, the Shawn Freeland - I don’t know if you’ve met Shawn.

Interviewer: I do know Shawn. Yes.

Respondent: He’d be a good resource for you guys out West. I don’t know. Because he touches lot of people out there, but it’s just a tougher – just like you look at this whole thing and our yield goals aren’t where it’ll be 85 bushels and you go 60, 80, 100 miles west to here, and they might be down to 60 bushel on a good year. That’s kind of telling you the story.

Interviewer: Yes, absolutely. I think we’re going to start wrapping up here unless, Olivia, do you have some additional questions for Dan?

Interviewer: No. I mean I was just going to kind of ask him as just kind of a wrap-up question, but for somebody who might be wanting to start incorporating cover crops, what are some of your starting suggestions? I know you had mentioned, “Take it slow. Don’t plant everything, the cover crops right away. Maybe use a variety.” I guess is there anything else that you can say to add to somebody who’s looking to start incorporating cover crops?

Respondent: One thing that I really like to – I think it’s important; if you’re just starting with cover crops, try to stay at five species. I’ve been talked into a few things like sunn hemp and it cost a lot for the seed, but I didn’t really see the benefit. When you talk to the salesmen, and they, “Boy, we’ve got this new deal.” The one thing about the radishes, and you noticed I didn’t mention radishes is because radish has got a big tuber, and they don’t work. Kale will still have a good top root and then they have so much grazing capability. The same thing with the purple top turnips on a grazing mix. I’ll put in some, but only maybe half a pound. Try to keep your cost down. NRCS has a really good worksheet on figuring cover crops. I really think, too, that when they do that they should maybe try to keep the – really pay attention to your carbon/nitrogen ratio. Keep your carbon level as high as you can because that’s what your soil armor is going to come from on the residue.

I said it once, but one thing, too, is try not to overgraze. I mean, see how much you’ve got. Figure out how many tons you’ve got, but try not to overgraze because that is such a detriment on the soil. When you have bare soil like I did it last year, we had a day where it was 100 degrees, and I put in a bare soil and our soil was 105 degrees. I put it in soil with cover and it was 84. Your mycorrhizae start to - all your animals in the ground start to die when it gets up to about 95 degrees and bare soil at 100 degrees. I think on our farm, keeping our soil covered with residue is probably one of the biggest challenges we have now on dry year would be our biggest concern.

Interviewer: Right. We’ve been talking cattle, obviously, but there are other species like sheep that can utilize these cover crops and be a big benefit not only to the animal, but obviously to the land, too.

Respondent: Well, because they’ll eat different things. I think that – but anyway I appreciate you having me on. You noticed I didn’t shave today so I apologize for that. Anyway, [Laughter] I just really appreciate you having me on because my main goal in life is just to help people better their soils. I’m passionate about that, and if there’s any way we can or whatever you girls - and don’t ever hesitate about calling again or doing again or emailing something because I’ll help any way I can.

Interviewer: Dan, I really appreciate this because as beef-free-pro person, I’ve just slightly dabbled in the whole cover crops and grazing cover crops, but it is so intriguing. The more you learn, the more you want to learn. So, I really appreciate you coming on and giving us some – probably just touching the surface on a lot of this stuff, but a lot of really great information.

Respondent: Another one that Brian Johnson, he’s at Frankfurt, east of Redfield. He raises wheat and oats and corn, soy beans, but he’s in that higher rainfall, and he grazes covers. Olivia, it might help you because he’ll either fly on rye or plant rye and then he got covers. He harvests his wheat, plants covers. As a podcast sometime, he might be a really good resource because he’s kind in your neck of the woods.

Interviewer: Yes. That’s wonderful. I might even just reach out to you for his contact information to maybe just pick his brain a little bit, so perfect.

Respondent: Yes.

Interviewer: Thank you so much, Dan. I’m very fortunate that my brother introduced us. Well, I actually, you came up to me and said, “I think I know your brother.” [Laughter]

Respondent: I know him. I know him.

Interviewer: I’m so thankful that we’ve made this connection through the years. For all the listeners on this podcast, Dan is truly passionate about what he does and is a true educator, too. Like he said, reach out to him and visit with him. He’s always, always willing to visit. Thank you so much, Dan.

Respondent: Yes.

Interviewer: With that, once again, this has been Cattle HQ brought to you by SDUS Extension, headquarters for all things beef/cattle. Visit extension.sdstate.edu for the latest beef information. Until our next episode, remember; the most important decision you make is to be in a good mood.

Male: Thank you for tuning in to 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 subscribe to the show on Spotify. You will also find show notes in resources from today’s episode. Until next time, remember; success is not a goal. It’s a byproduct.

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