

Rukmini:

Hey everybody, this is Rukmini from NRPA and you're listening to the Guardians of Greenspaces podcast, the show that explores water conservation from a park-and-recreation maintenance lens.

Today, we're talking about sustainable turf with Lee Van Meeteren from Sioux Center. We'll discuss how turf safety and water conservation go hand in hand, and how implementing sustainable turf can save staff time and money. Thanks for joining us, Lee!

I'd love to just ask you to introduce yourself for our listeners.

Lee Van Meeteren

Hi, I'm Lee Van Meeteren. I work for the City of Sioux Center. I've been the parks director here for 18 years. I also serve on the National Sports Turf Field Managers Association and also for the Iowa Sports Turf Managers Association. Yeah, I'm excited for another year.

Rukmini

Awesome, well thank you for being with us to share your expertise. I'll jump right in. So we're here today with you to talk about sustainable turf. And I just want to start with the background. What do you consider sustainable turf and what does that look like in Sioux Center?

Lee Van Meeteren

Yeah, sustainable turf for me also has a lot to do with turf safety. But for athletics, that's the number one thing that we talk about. And how do you maintain turf that is safe? There's a lot of different ways to look at that. So for us here at the Center, we take it very serious that we control our inputs. We want to have the highest quality turf all the way from playing tee ball, softball, and baseball all the way to college athletics.

We use a lot of different, a lot of different methods here and it is very important to us to limit our inputs as much as possible. So, so we try to sustain our turf grass through a lot of natural ways that we can do it, to try have our grass last the eight to nine months that it needs to here in Northwest Iowa and so we try to use more cultural practices than we do chemicals and things like that.

Rukmini

So I also love to see the connection, right, between how do we make sure that the same practices that are keeping people safe are actually conserving our natural resources? Like, that's amazing. I want to hear more about it.

Lee Van Meeteren

Yeah, absolutely. So obviously water is a very important resource for anything that needs to grow. So how do we have safe playing surfaces without over watering, without overusing our resource that is very limited in many different cities across the United States?

So what we do is we try to have very thick, thick turf. We try to control our water intake by allowing our soils to hold as much water as long as possible. So, and then we also use a lot of different methods of measuring our moisture levels in our soils on a daily basis to how much do we really need to water.

So we watch our evaporation rates through different weather stations. We use our testing tools that we use on our staff. And we use a lot of highly technologically advanced irrigation clocks from a variety of different vendors to give us the most information that we can to make the best decisions that we can for how much we water on our turf.

So we know when it rains that we want our soils to absorb everything that it can and not just run off the fields, run down into our retention areas and into the creeks and the rivers in Iowa. So we are a very heavy farm-based agricultural ground around here.

So there's a lot of eyes on how do we maintain our farm ground, but also how well do we maintain our turf. And the two do correlate quite well together.

Rukmini

But actually that's a perfect segue into what I wanted to ask you, which is how are your park users responding to some of the advances that you're making with having more sustainable turf?

Lee Van Meeteren

Yeah, it's interesting. Our turf users, we don't get a lot of conversation with them about the overuse of things. What they are concerned about is their children's safety on our fields. And is the turf allowing that to happen? Is my child safe to be out here? Are there chemicals being applied?

Is the grass coverage well on the turf that my kid will not hurt himself, get concussions, roll ankles, all those things. So our end users are more focused on how is the playing surface being played. So I think I'm ahead of the game a little bit that people aren't questioning why we're doing what we're doing because everybody is very well informed. I think it's easier for me to explain every spring *why*, with our local newspapers and social media.

Why why do we do what we do? So they're they know when they're signing up for programming within the City Center or in the other programming that uses our facilities. They already know that we are doing things that make the playing service safe for the children. Not only from a playability standpoint, but also from what is being applied to these athletic facilities.

Rukmini

I mean, it's great to see. You mentioned that you've been at Sioux Center doing this work for 18 years. So I imagine some of that too is like trust that's built over time. But you alluded to something which is I wanted to ask you more about, which are just the challenges that you faced or that other agencies may face in trying to implement sustainable turf solutions and what that looks like specifically from that maintenance lens. Are there specific maintenance challenges? Like how are you going about addressing those?

Lee Van Meeteren

Yeah, I think the challenge that every turfgrass manager faces that I ever run into or talk to is always money, right? So, trying to do things the right way always costs money. So how do we get the right equipment? How do you get the right programming for your chemical obligations.

Is it organic? Is it not organic? What are the cost differences to try these different methods? So what we do here at the center is, I mean, over the 18 years that I've been here, I've built the trust with our city management, city council members, also the local school systems to

this is what it takes to do things the right way. And I started slow. So I picked two fields. And this is how we are to maintain two fields. And this is the results that we're going to see. I prayed that the results that I was going to see. So you start with a couple. And then the next year, say, then you can show the results. You can show that, the cost difference was only x, not thousands and thousands of dollars to do things the right way.

Sometimes I had to hire outside crews that have the equipment to do my plan and then eventually the plan works. Then you budget for those the same piece of equipment and now it's on your now it's in your tool closet. So you know the challenge of getting everybody to come on board with these plans that I come up with.

I usually start small with everything I do-- trial basis. I pick a Soccer field or a football field and I just try something new every year. So always trying to advance myself and advance the industry. And that's what I love about being on all these other associations, just like the National Park and Recs, is like, there's always somebody out there trying to do something new and to advance ourselves.

And we need to just jump on board with some of these things and try it. And I've tried a lot of things that I've epically failed. And I've tried things that I thought were going to fail that worked and I still implement to the day.

Yeah, so I'm trying to think of a really good example of a fail. I think it had more to do with-- We changed over a lot of irrigation clocks too fast for us and we didn't fully understand the capabilities of a clock and we thought we knew what we were doing and we ended up-- we flooded a few fields right before games. We thought we were watering a few times when we were actually not. So it was too many fields at one time. We were trying to manage new systems and it just didn't work.

And we did spray a few, we call, either water retainers or water--, like trying to get the water to either hold or water to flow through our soils. We know we're going into a rainy season, we want that water to flow through our soils as fast as possible. So we actually mixed up those some one time and we put down a retainer when we were actually trying to get the water to flow. So it's just little things like that.

It's just a learning lesson of how do we approach a change. And so that goes back to the statement I said earlier about making a change and doing it small first and not jumping two feet in. Let's tip our toes in it for a little bit.

Things that we've had very high success with very quickly is one of them was our organic fertilizers. I was very hesitant. I did not see the data. I did not see the proof from other facilities, even the vendors that were selling it. I just didn't have a lot of confidence and

they're like, just try it, Lee, just try it. And we think that with your soils that you have in Iowa, we really think that this is gonna be a huge success for you.

And so was like, all right, I said, give me enough for these two soccer fields. I'm going to do it on these two soccer fields. They're my poorest soils. The hardest to get a really good growth, really good coverage of my turf. And I would say within three weeks, I had the best turf out of all of my grass. And I was bought in. And so ever since then, I'm all in. And actually that organic fertilizer that I can't name any names, it was a cheaper way to do business for us.

Rukmini

It's amazing that you have this sort of room to experiment and that you kind of carved that out for yourself. And I'm kind of wondering how, you know, your maintenance staff feel about like implementing something new every year or trying new things or if they're coming from a place where maybe things are done more traditionally, they're moving over to where you're at and they got to kind of, you know, catch up to where you're at. So what have you seen in terms of new staff coming on board? You know, impact of this sort of trial and error on the staff that you currently have? Are you implementing their ideas? Yeah, I'd love to hear more about that.

Lee Van Meeteren

Yeah, so definitely the full time staff I have on hand, they've all been with me for over 14 years now. So I've been very blessed that the staff is bought into what we are doing here at Sioux Center. And I have a very low turnover rate, even in my part time staff. So I feel very blessed with that. The few guys that I-- that do work on our athletic facilities.

They obviously they do question like Lee, why are we doing this? Like what is the purpose? We already are doing things that are working really well. So why would we change that up? And I said, well, you've gotten to the really well by trying new things already. And so why can we not try more new things and take things to another new level?

Sometimes we have lot of conversations about what are we trying to accomplish? is this process going to, is it going to help us with what we're trying to accomplish? Or are we just trying this just to try it? And so sometimes it's yes to both. So yes.

We are just trying things to try things. It's gonna, know, sometimes it's just about trying to save \$1,000 in our budget. Like, this is gonna just save us money. Or is this process going to allow us to get another 30, 40 games in for a year that we could rent the field out and generate income that way? Or is it, hey, we don't need to apply this herbicide-- we do this process then we can save the money on the herbicide but also it's just one less application and one less thing that we need to enter into our soil. We're all about trying to limit the amount of chemicals that we use on a daily basis here, so the healthier the turf the less chemicals I have to use.

Rukmini

Yeah, I'm hearing that, you know, again, it's the relationship building of you with your full-time staff, with your part-time staff, they're on board, they're bought in, and they're part of the conversation. So what we keep hearing over and over again is like, all of these water conservation tools, all this like environmental sustainability work, it just doesn't get anywhere unless the maintenance staff are bought in and their feedback is heard and implemented. I mean, it's been a through line across every single one of our conversations.

Lee Van Meeteren

Yeah, I think the most important part of running any crew is communication and technology and all these other things. I am very blessed that I have a staff that loves technology and they love-- I'm pushing for things that I don't even know how to run. And these guys, they love everything about it.

There's a lot of parts of my job that I don't even know how to do anymore. But that, and that's fine with me. I think that gives them more ownership. And I think it's interesting to see how fast we can keep up with the change. Because the change is happening so fast. And in all industries, but I think the turf grass industry as a whole, there's a lot of eyes on athletic fields across the nation and across the world. And especially in the coming years with FIFA coming to the United States and turning everything to natural grass.

There's a lot of eyes on playing surfaces and what is the world doing to create these wonderful playing surfaces but be environmentally safe at the same time.

Rukmini

Well, I think that's, it's a great segue into what I wanted to ask you next, which is around the benefits that you all have experienced using sustainable turf practices.

Lee Van Meeteren

Yep. I guess a few things that I want to talk about when we talk about technology. I am also a farmer. I'm a crop, a row crop farmer for corn and soybeans at the same time. And the technology that the row crop farmers across the United States are using is very advanced. There's a lot of money in the Ag industry.

And I kept all those hours of me sitting in those tractors and the sprayers and all those things. I just kept thinking, how can we use this technology in our turf industry? I think, I know it's an expensive, it's a very expensive way to look at the technology. We just don't have the acres typically that the Ag industry has to offset the cost of that technology. So, I am very blessed here in Sioux Center that our city council, our city managers, almost everybody here is related or understands the Ag industry at a very high level. So when I present new sprayer technology, so we talk about guidance, auto steer, we talk about individual nozzle controls on our sprayers, boundary controls-- We are spraying exactly where we want to-- pulsating nozzles on our sprayers.

All this technology that is out there I start presenting some of this stuff to our city manager and our council and they're like, yes, we understand this we understand what you know, I'm looking at. We're going to add 20 acres of sports complex. How do we not spend more money on our chemical budgets? And how do we get all that done without having to increase all of our budgets? And I was like, well, for me, it comes down to technology.

Like, if I can put a sprayer together, or if I can put the same technology on my tractors, my small tractors and we can fertilize like this with guidance controls and all this stuff. I think we can get there. So let me start with a sprayer.

Yes, so I've answered a sprayer with individual nozzle controls and auto guidance controls. That technology alone saved me close to the \$8,000, \$10,000 of spraying capabilities. It was a large investment. The whole sprayer is a whole 60 some thousand dollars at the time. I think it's a little bit more expensive now. This was pre-COVID. So we've been running that technology here for I believe six years now. So that springboarded a lot of other technology in our operation here.

Now all of my tractors, I think we have four now that are all wired with GPS guidance controls and so whenever we do a fertilizer application our spacings are always perfect. Whenever we seed whenever we airify whenever we top dress whenever we do any application; we are, we know exactly our spacings.

We are being super efficient with our time with our equipment. And so that same technology when we come back to our building automatically downloads into our computer systems, and we have direct reports of absolutely everything that we do on our athletic fields. So we have our maintenance books that we know exactly what we do from year to year and just prints it out for us. All we have to do is press print and we know exactly what we've done for the year. And that data, that information is priceless for us.

We can look back at 2023, 2024. We look at what are we gonna do in 2025? And we can look back at all that data and be like, all right, this is what we used. We think that we did potentially over apply this or we under applied this. And all we have to do is go back and just say, this is our new plan for 2025.

We are either typically-- every year we save money by looking back at what we did and said that was too much or we didn't have to do that. And we consistently try to save our budget and just being able to look at that data. And so we look at our sheets and we look at our air temperatures, our humidity levels, our wind directions, and they give us advice on like, okay, this is when you sprayed, or maybe if you sprayed when there was this much humidity and not this much humidity, like, you'll have less evaporation into the air.

Well, that's great to know, so when I sit down with our vendors I we can look through our books and we said okay This is exactly how much stuff we used last year to the ounce like we know exactly to the ounce what we use on a yearly basis So I don't have extra products sitting in my storage, that could potentially be wasted and then what do you do with wasted chemicals and stuff like that. I'm not about waste. I'm going to use everything I have. So if I'm going to buy it, I'm going to use it. So I'm very careful on how much product I use and that technology has proven very successful for us. It may seem very expensive up front, but we have gained all of that money back in a very short period of time.

So you may think that it's just not affordable. I think you can start small. We actually ended up doing a three-point sprayer this past winter, or two winters ago, sorry, 23, 24 winter. And we put all that same technology on a little three-point sprayer. So when we spray some herbicide stuff in our parks, I can get my rates, can get my shutoffs, I do not over apply a single ounce in my parks. And that alone, I've only sprayed one fall that way and it saved us almost 40 gallons of herbicide in one winter.

And then the comfortability of knowing that the public knows, because I'm very upfront with them, that we're doing everything we can to not over apply anything in our park systems. I'm very upfront, like we are going to spray this in this park. We're to spray this in this park and this is what it does. This is what could or could not affect you or your children.

Rukmini

All right, well, I think that's all the things that we wanted to ask. Is there anything else you want to mention as we're kind of wrapping up here?

Lee Van Meeteren

Yeah, when I think about my staff, I think everybody in the turf industry understands that we are all short on labor, right? So how do we keep our labor engaged? How do we keep our labor not feeling burned out? I think that the burnout factor in our industry is very, very high.

So take a guy like myself, how do I keep myself invested into this thing after 18 years and what is keeping me from moving on to a different industry? I think for me, it's the drive to do better. And that comes down to my staff as well. My staff, they are very intelligent in a lot of things that I am not. So, and when they are doing the applications for me and for the city, they are seeing things and stuff that I need their feedback for me to make really good decisions for our future.

I think my staff in particular is making sure that I am a boss that pushes them to find ways to do things to save us time and money and implementing a lot of technology, implementing new ways to do things, new equipment to make their lives easier. Because it all makes our lives easier. We all have children that are engaged into sports and into our park systems.

So I think understanding and putting the correlation together that we are also users of what we do, that we want what's best for our children and our children's children. And at the end of the day, we are given the right and the privilege to maintain our green spaces for the next generations to come.

And if we can set the foundation for the future to do things better than what's been done in the previous generations, that is what keeps my staff engaged. And they love everything about it. So it gives me the ability to have this conversation with you guys. They are out there getting the work done and we're gonna turn around right after this conversation and we're gonna sit down and we're gonna talk about what I talked about on here.

But at the same time, they know everything that I'm talking about. They know everything that we're doing because they have buy-in. And I think that's the biggest thing that

I've learned over the years is I can't do it alone. I need their, because they have better ideas than I do sometimes. And I think that's fair in any, any industry. But when we're out here grinding really hard in 90 degree weather, 100 degree weather, and there's got to be a purpose. Our purpose is sustainable surfaces for our town and our city and our end users.

Rukmini:

Thank you, Lee, for sharing your expertise on sustainable turf and how sustainable turf can support water conservation through maintenance staff leadership. Check out our other episodes on water conservation tools, including green infrastructure and community engagement, on Guardians of Greenspaces. We appreciate everyone listening and reminder— answer our key question and you could win a \$50 NRPA store gift card!

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