

Andy Chamberlin: I'm your host, Andy Chamberlain, and I take you behind the scenes with growers who share their strategy for achieving the triple bottom line of sustainability. These interviews unravel how farmers are building their business to balance success across people, profits, and our planet.

[00:00:30] Farmer Mark Fasching lives just a few miles away from me, and he also knows that I like to check out new equipment. So one day last summer, he called me on a Sunday morning and said, "Hey, I think you want to come down and check this out. Bring your camera." So that's exactly what I did. And this episode is a bonus episode with something a little bit different than the typical interviews that we do.

We heard from Mark and his wife Krista of Jericho Settler's Farm back in Episode 3 of the show. So [00:01:00] if you'd like to know more about him and what they do, be sure to listen to that episode as well. So enjoy this special episode where Mark shares a little bit about what it's like farming cover crops.

It's June 12th, 2022. We're at Jericho Settler's Farm, 11:00 AM, and this is The Farmer's Share, [00:01:30] Speed Discing Rye in a Cover Crop Field.

When I roll up to the field, the tractor is just flying down and he's already about half done doing what he needs to do. Now, the first five minutes of this, I hop into the tractor and start talking, so the audio is a bit hard to hear, but after five minutes it gets better. So hang on, and keep on listening.

Mark Fasching: So this is winter rye, which [00:02:00] my boy seeded back in the fall, probably September, and it was in rye before that so basically just did the same thing, hit it a couple times. So this is just one pass. See how the pass does. A second pass gets it in a little bit better.

Andy Chamberlin: You said it was rye before, and you did rye again-

Mark Fasching: Yeah. We-

Andy Chamberlin: ... just for organic matter?

Mark Fasching: Exactly.

Andy Chamberlin: Yeah.

Mark Fasching: Really, what we need to do is [00:02:30] bear-fallow this this summer. So knock it down one more time, and then get in here with a Perfecto cultivator and just let the weeds flush, knock it back, let the weeds flush, knock it back. Do that during the summer. And then, we either do oats or rye again. We're trying to figure out what we want to do. We don't get back onto this farm for another two years. So what we might end up doing is actually seeding it to [00:03:00] a clover or pasture mix or hay ground mix and have someone hay it instead of me out here

doing this. And then, that way we're getting the legum nitrogen fixing. So that's really probably what we should be doing. Because we do four-year rotations between farms. So we're on the Richmond Farm right now for four years, about two years left out of the four doing cash crops.

And then this farm, which we call The River Farm, we rest for four years. [00:03:30] Rest.

Andy Chamberlin: Yeah.

Mark Fasching: So you're doing cover crops or really what we should be doing is seeding it down into a clover, alfalfa, whatever, grass mix, and let somebody hay it. That way we're not beating the soil up all the time. So it's really... It's a key thing for us is just resting these two big parcels that we do our cash crops on. And before we come back to them, it's [inaudible 00:03:58]. But, [00:04:00] until we get that dialed in, they're just doing cover crops.

But we were on here... Well, let's see. We bought this farm back in '15, I think. So we did, for maybe even did... I think we got five years. Four, five years. I think we got five seasons out of this before we jumped back to our farm in Richmond. So this is really the first rest of it since we bought [00:04:30] it.

But anyway, it could be a little bit of a bumpy ride. Really, the second pass you have to slow down. I can go pretty fast in the first pass. But that second pass, it creates a little bit of bumpiness, like choppy waves, it'll really balance. So I just slow down, and it mixes it pretty good anyway. If you go too fast, just that disc even-

Andy Chamberlin: Yeah. Then [inaudible 00:04:55] it's bouncing.

Mark Fasching: Yeah. As heavy as that disc is, because it's got weight on it and it actually is very heavy, [00:05:00] it still bounces.

And at some point, we can chat about big tractors, but this is all new to me. I'm still learning all the bells and whistles on it.

Andy Chamberlin: Yeah, it's new to you.

Mark Fasching: So it's a power shift, which is basically four gears and six speeds forward. Four gears and six speeds reverse. And you can preset, with various buttons, you can preset based on what job you're doing, discing or [00:05:30] hay work, or what have you. And then dial that in and just it'll go and do its thing. You've still got to steer it, unless you have auto steer, which we don't. But all I really do is just put my foot down. If I want to go fast, I mash [inaudible 00:05:45].

Andy Chamberlin: You just hammer that [inaudible 00:05:48].

Mark Fasching: If I want to go slow, I just ease up on the pedal. But there's no shifting, there's no actual-

Andy Chamberlin: Oh. Yeah, yeah.

Mark Fasching: I mean, there kind of is here, this forward, reverse.

Andy Chamberlin: Right. You can.

Mark Fasching: You can.

Andy Chamberlin: But-

Mark Fasching: You can, but I just use my foot pedal, which I don't know [00:06:00] if that's the best way to do it, but that's what I do. I have only got involved with [inaudible 00:06:03].

Andy Chamberlin: That's what you're used to.

Mark Fasching: Yeah. So it's pretty slick. And then, a lot of things are right here. So grazing the three-point hitch, lowering the three-point hitch, forward, reverse. I can do my remotes off the back here. It's all right there in the-

Andy Chamberlin: Right in one grip.

Mark Fasching: Yeah.

Andy Chamberlin: That's nice.

Mark Fasching: Well, so you can set your speed here forward, reverse, raise your three-point hitch, lower your three-point hitch. I [00:06:30] don't know what that one does yet or that one but, in this, your remote's in the back so if you've got something that you need to use remotes for, you can hold it right there.

This sets your draft control of your three-point hitch. So I can do this on the fly, which is slick. And then you can also do your speed here as well as-

Andy Chamberlin: In place of your foot. Yeah.

Mark Fasching: So, yeah, it's pretty slick. Anyway.

Andy Chamberlin: How many horse tractor is this one?

Mark Fasching: This is 150 horse.

Andy Chamberlin: Wow.

Mark Fasching: Yeah. [00:07:00] Used. We bought a used out of Canada probably two, three years ago. So before Hughes tractor prices started going through the roof. The time was right. The timing was right. And there's some days I look at it and go, "Oh, my God. This tractor's way too big for our medium-sized farm. But when I get in, I

use it with the implements because we [00:07:30] upped our size of our implements. It's like, "Okay, yeah. Now I get it."

Andy Chamberlin: It feels right, yeah.

Mark Fasching: We get stuff done quicker. So it's nice.

All right, so we're down on the disc. And so, you're usually doing... This disc actually works better at higher speed. So high speed being anywhere from 7 to 10 miles per hour. And I usually, on this field, we're doing about 8, 8 1/2 [00:08:00] right now. This screen tells you everything you're doing.

So the rise anywhere from 4 to 6 feet in height, depending on... You see some areas are quite a bit taller, and some were maybe a bit lower, based on nutrient capability of the soils.

[00:08:30] So that's a five-acre field I did last night, and I did that in an hour and a half. Knocked all of that in an hour and a half. [inaudible 00:08:57] pretty nice.

Andy Chamberlin: I knew when you said, "I'm doing it now," I had to hurry.

Mark Fasching: Put your [00:09:00] coffee down and go. Well, we've got some other fields to do.

Andy Chamberlin: The pin was in the field. I'm like, "Okay."

Mark Fasching: Yeah. So you can see what... Obviously, there's still... For me, this is not the best time to put this rye down because it's really... It's lignified. It's getting stocky. It's sending all of its energy to the seed head. So it's really a little too coarse. That disc [00:09:30] doesn't really incorporate it all that great at this stage because it's woody. The stem is too woody to really get cut and disced, and covered into the ground. So probably two, three weeks ago would've been better, or better in incorporating the material into the soil. But that being said, it still gets in. A second pass does it much better. We can do a second pass and see how much more [00:10:00] dirt that throws into things and chops things up. But that being said, it still does its job.

So we can do a second pass on what... Just so you can see what that looks like. But you definitely have to probably four to five miles per hour, as opposed to [00:10:30] seven to nine. Because otherwise it gets pretty bumpy. And again, you can adjust. And I can adjust how much pressure, downward pressure, is on that implement on the back with my draft control. So if it does get real bumpy, and I just want to lightly touch the surface, then I can adjust it right on the fly with this guy. You can see it coming up.

Andy Chamberlin: Yeah.

Mark Fasching: Right? So that's all right there with that dial, [00:11:00] which is slick.

And there's various settings. We can go over that. But there's various settings on the disc itself to how deep the discs will cut. I think there's eight settings on that, from if you want it to cut when it's fully down, if you wanted to cut it two inches to, I think the deepest is five inches. And so, you can modify that. I pretty much just put it on the deepest [00:11:30] cutting, and then adjust it with the draft control. That's how I do it.

Andy Chamberlin: Right. Right. So you'll go over the whole field again with this?

Mark Fasching: Well, it depends what I want to do. I mean, I have lots of options. Down at the Richmond Farm where I'm prepping ground for fall roots in a field that's either rye or rye vetch, [00:12:00] I will actually flail-mow it so it cuts it up fine, and then do a pass with the speed disc. I call this a speed disc because it's also called a speed disc because you can move at a pretty good clip. It's also called a disc plow, and I think they call it a disc plow because it really does neither of those things very well, in my opinion. It doesn't really. In a perfect world, all this green material would get flipped [00:12:30] and be buried under the soil where the microbes can work on it. Whereas, if you look at it here, it's half and half. Half of it's probably underneath the ground and under the soil, and the other half sits on top where, again, it's back to timing of your cover crop. In this case for the rye, it's really too late to really get the maximum benefit out of this cover to turn it in now. But every day I wait it gets worse. So it really should have been turned in when it's a lot greener, [00:13:00] and breaks up faster.

But the other farm where I actually want to get a cash crop on, usually about four to five weeks before I'm actually going to direct seed, in our case roots, I will flail-mow the crop, which really breaks it down. And then immediately after I flail it, I disc it in with this, and [00:13:30] that is a better incorporation. And then, I'll let a week pass, and I'll chisel-plow it, and then let another week pass, and hit it with a disc one more time. And that usually gets me pretty close to a condition with another week following, probably. And I use a Perfecta to smooth things out before I fertilize and add and shape beds. So there's a lot of steps, obviously. But it does, with this big tractor [00:14:00] and all the implements that I have available to me that I can really do a lot of land pretty quickly because it's just me doing the field work and cover crops. So, for our farm, it's about 30 acres of cash crop and another 60 acres of cover crop. So we have about 90 acres total to play with, but [00:14:30] we're doing-

Andy Chamberlin: Wow.

Mark Fasching: ... We're not doing-

Andy Chamberlin: I didn't know you were doing that much.

Mark Fasching: Yeah. So the beauty of a big-size tractor and the various implements, the bigger implements, that I can use with this and other tractors. This isn't our only tractor that we have, but that allows me, just one person, to be able to do

cover-cropping, incorporation of cover-cropping and weekly seeding of greens, getting beds prepped, fertilized. So that's a one-person job. [00:15:00] It would be faster if I had another field person to do it. But I don't. Which is fine.

Andy Chamberlin: You've probably got enough to do here in the tractor most sunny days, hunh?

Mark Fasching: Yeah. Yeah. In various types of tractors. And we have a lot of different tractors, cultivating tractors, the bigger field tractors for field work. So, yeah. It's jumping from tractor to tractor, which is fine. It makes it enjoyable. But yeah, a lot of different aspects of those, so your [00:15:30] big implements for doing big field work like this. So there's here, on this farm, you add it all together, there's about... Fields five, there's probably close to 50 acres here on this farm that's in cover crop that's tillable for us to use. So right now it's all in cover crop that needs to just get incorporated, and then we come back in here and either seed another cover crop [00:16:00] behind it, or bear-fallow it, or a lot of different options.

You can see at the very end where I slowed down, it really doesn't do-

Andy Chamberlin: Oh, yeah.

Mark Fasching: It's almost like it just crimps it.

Andy Chamberlin: Yeah.

Mark Fasching: Lays it flat.

Andy Chamberlin: Knocks it down, but-

Mark Fasching: Yeah. But it doesn't really incorporate it. That's because I'm slowing down. That's why they [00:16:30] call this thing a speed disc. It actually works so much better the faster you go. Obviously, within limits. You're not doing 20 miles an hour, but for me it's anywhere from 7 to 9. I can go a little faster depending on the cover crop rise a little. There's a lot of material there, and if it gets stemmy then it slows you down. Or you need to slow down for it to incorporate better, but if it were a different crop, I could [00:17:00] probably go faster. But if I can do five acres of cover crop, rye cover crop, in an hour and a half, that's pretty good for me.

So actually where you see the rye, that's actually quite a bit lower, and you look back and you see there's more dirt over that, that's because of when it's smaller, it incorporates much better.

Andy Chamberlin: [00:17:30] Oh. Because the rye is smaller.

Mark Fasching: Yeah. So when you get into a section where maybe just nutrient-wise in that soil, it didn't really grow that rye?

Andy Chamberlin: Yeah.

Mark Fasching: It incorporates much better. So back to timing of your cover crop. For me, it would've been... I'd really incorporate this a lot better if it was much younger.

You can see all the poisonous parsnip that's coming in from the last... Well, since we've owned it. That first [00:18:00] year that we owned this in '15, there wasn't any parsnip out here.

Andy Chamberlin: Interesting.

Mark Fasching: And it just showed up along the roadsides. It's probably the state roadside mowing, they probably were picking it up from somewhere.

Andy Chamberlin: Wow.

Mark Fasching: And then, all of a sudden, it's everywhere.

Andy Chamberlin: Huh!

Mark Fasching: That's nasty stuff.

Andy Chamberlin: Where'd you find this disc?

Mark Fasching: There's a dealer out of New York that sells [00:18:30] them. I think it's a Czechoslovakian company, Farmet. And he's been at it... I think they came here maybe four years ago, and he had some demo units. And this is a 10-foot-wide demo unit that he sold me about three years ago at the end of the season, so I got a good price on it. [00:19:00] They do various widths. I think the narrowest three-point hitch model they do is a 7-foot maybe, 2 1/2-meter. This is a 3-meter. I almost pulled the trigger on a 12-footer, 4-meter, but I didn't. And then they have various... They also have one that's not a three-point hitch as you go in width that's a towable with transport tires on it. [00:19:30] So there's a few farms in Vermont that have them, various sizes.

Justin has one that's a little bit narrow, not as wide as this one. I think Pete has a big transport one. They really excel. And again, based on where your cover crop is, it's all about timing. They really excel in getting stuff turned in pretty quickly. As you can see here, it [00:20:00] incorporates pretty well. And as you play around with... Each cover crop is different. But as you play around with... Again, the size of your cover crop, what type of cover crop it is. And when you're incorporating it, you have to do another pass. Sometimes I'll go opposite, almost opposite, the grain. So, in other words, one direction lays down that cover crop going-

Andy Chamberlin: The other one will chop it.

Mark Fasching: ... way. And the other one-

Andy Chamberlin: Slices it the other way.

Mark Fasching: Yeah. So [00:20:30] sometimes that works a little bit better. Sometimes it doesn't.

But I usually find... But letting it mellow a week, and then discing it again does a pretty good job. And then following with a chisel plow, which brings up a little bit more soil and can bury some more of that crop, let that mellow a week and then hit it with the disc again, does a pretty good job.

So, yeah. We're [00:21:00] about half-speed, which is probably four miles an hour. This might be the speed you would do if you're pulling a transport disc. If you were trying to pull a transport disc at 8 to 10 miles an hour, something would go wrong. But what's amazing to me is just how fast you can turn down a crop like this. So you look over there, and you can see that rye four to five feet high, and it turns it into [00:21:30] that.

So here we're going against the grain on one of these, right? You see it picking it up. It doesn't really... Again, I'm going slow, so it doesn't really work very well at slow speeds. And the way those discs are set up, you see one, the first, they're opposite each other. One set of gangs is angled maybe 30 degrees one way, and the other one's angled 30 the other way. And [00:22:00] they're notch discs, so they cut. They're cutting discs. One throws the soil one way and the other one throws the soil the other way. And then, they have roller options. So that's the roller that the demo model came with, which is a pretty heavy-duty roller. But they also have open baskets, and you can switch those out if you want to for the back roller. I haven't ever run that, so I have no idea what that looks like after a pass.

But [00:22:30] the nice thing about that heavy-duty roller in the back is when things really get incorporated, it prepares a lovely seed bed to either do cover crop or your cash crop into. So you really almost don't need to use another implement.

Andy Chamberlin: Yeah.

Mark Fasching: In our case-

Andy Chamberlin: If you caught the crop early enough to-

Mark Fasching: Yeah, exactly. So I'm trying to keep this disc on there as long as I can [00:23:00] until my cover crops are where I need them to be. And then I can switch out to... I've got a Perfecta cultivator, which is more like a seed bed prep implement, and that's 20-foot wide, which is great for this size tractor. And then, when I put that on there, I like to keep that on there. So, obviously, I can change a lot of different things on this. Well, any tractor, [00:23:30] you can switch implements out, but if you don't have to switch implements out so frequently, then it's-

Andy Chamberlin: Yeah.

Mark Fasching: ... It's nice, and you can get a lot of work done.

So what I'm going to do... Usually what I do on each... I don't have to, but this is what I do. I just do a boundary on the edge, and then I'm back and forth.

Andy Chamberlin: It gives you a spot to slow down and turn around.

Mark Fasching: Yeah, exactly. It's more of a visual cue than anything for me because the grass is so high.

Andy Chamberlin: [00:24:00] Yeah, this is tall over here.

Mark Fasching: So you see where that's been lodged down?

Andy Chamberlin: Yeah.

Mark Fasching: That actually will not disc up very well.

Andy Chamberlin: Oh, yeah.

Mark Fasching: More of it's left behind because it's matted. And again, back to the condition of your cover crops, this stems of this rye are starting to get so woody, it's almost like a bunch of logs being laid down and it just goes right over. You'd think [00:24:30] that the heavy disc would cut right through it, but it doesn't really do a very good job of cutting through if it's actually laying down. And to a certain extent, when you flail-mow, it's a similar condition, but things are finer, so it does a little bit better job of cutting through it.

Andy Chamberlin: In the next part of this episode, we hop out of the tractor and talk about some of the equipment. And the first thing we do? Step back and admire this big tractor.

Mark Fasching: Yeah. It's like [00:25:00] I said, there's days when I look at this tractor and go, "Oh, my God. It's such a large tractor. What are we doing with a large tractor out here?"

Andy Chamberlin: "I'm a small Vermont farmer!"

Mark Fasching: Yeah. And we've used smaller tractors and smaller implements for years until we got this about two years ago. And I think it's great. It opens up a lot of possibilities for us to farm [00:25:30] better, farm faster, be more efficient, which is certainly key nowadays with fuel prices skyrocketing. So, yeah. I love it. I almost wish we had another one this size. But over the years we've kind of bumped up. Our biggest tractor horsepower was, up until we got this one, was we used an 85-horsepower tractor, which is a fine-size tractor for [00:26:00] the size of farm we are. But doubling that horsepower has made a big difference on getting a lot of cover crops incorporated, a lot of field work done in a timely manner, and much faster. And so, we've slowly upped our tractor size. The next size tractor horsepower we have is 120-horse, which is a fine- [00:26:30] size tractor for the

size of farm we are too. If we didn't have this big one, I think that would be a perfect size as well.

But I like it because we can use bigger implements on it and wider implements, which again, your number of passes through a field, if you can make it in fewer passes and a short amount of time, that allows you to do [00:27:00] more or take some time off, which is nice to do as well. So you can... I mean, this is a great example of what this does. Again, I keep going back to size of your crop. This is almost like it's crimped. This isn't really going to do you much. If you did another pass, then that would get incorporated a little bit better. But it lays it down like it's crimping and then it almost, when that disc comes over it again, it doesn't really cut it up very [00:27:30] well. It's really too-

Andy Chamberlin: It pats it down?

Mark Fasching: Yeah. There's still some green material in there, but it's starting to lignify, getting woody. And, like I say, a second pass will break some of these. That's the base of the roots. It'll break some of this up a little bit more, maybe bury some more of this for the soil for the microbes to work on.

But yeah. Again, it's [00:28:00] a timing issue. So if I'd gotten in here a couple of weeks before when it was a little more green and less stemmy, I think one pass would do the trick. I wouldn't have to make another. And then you could either drill something right into that and you'd have better seed soil contact as opposed to this. I would want to hit this one more time before I would either drill something in. In our case, [00:28:30] I think we're going to bear-fallow it, but where it does, you can see where it's buried some stuff, so you've got some soil.

Andy Chamberlin: It varies when it-

Mark Fasching: Right?

Andy Chamberlin: ... it's going to break down.

Mark Fasching: Exactly. It's going to break down much better if it's buried. So, yeah. It looks rough. It is rough, but you're still returning something to the soil. And we're fortunate that we have enough acreage to be able to do this.

But if we go to [00:29:00] a pasture or a hay meadow, which I think is really what we should be doing, because then you're not beating up the soil every year. You're really resting it for that four-year period that a block that we do that, and someone else is just cutting it for haylage or dry hay. They're not disrupting the soil. They're just taking what's growing off the top. And if it's a leguminous mixture with clover and alfalfa and [00:29:30] some other grasses, then you're putting all that back into your soil too. So I think, ultimately, that's the way to go for our four-year rotations is really just after that last season of cash crop before you rotate to

the other farm, is you seed that down into a pasture mix or a hay meadow mix. Then I won't be out here doing as much of this, but I still do it on the cash crop.

Andy Chamberlin: You'll have [inaudible 00:29:57] somebody else out here with as many pastures doing hay.

Mark Fasching: [00:30:00] Right. But that's them doing it. So that's their time is... And the soil's still getting built up, but we're just not... So-

Andy Chamberlin: Are all your fields this clean of rocks?

Mark Fasching: Yeah. There's a few bony sections in here. That piece across the road is really bony, but that's that we rent that, and I don't even know why we hang onto it, but I have a rock picker that I can use on there.

Andy Chamberlin: Oh, okay.

Mark Fasching: But that helps a little bit. But again, it's a time management issue. But yeah. No, [00:30:30] Winooski River back in here, it's all Hadley silt loam which is, I think, is some of the best soil in the state. And our other farm in Richmond is the same. It's getting along the Winooski River. It's the same soil type.

I think we have maybe 12 acres that's a little sandier, but most of it's this silt loam, which is just beautiful soil and grow amazing crops on this. And it doesn't beat up your equipment if it's not so bony, right?

Andy Chamberlin: Yeah, right.

Mark Fasching: I mean, I don't know, your granddad's probably got some bony [00:31:00] ground up there.

Andy Chamberlin: Yeah, we definitely-

Mark Fasching: Is it all bony or-

Andy Chamberlin: It's not all bony, but we just-

Mark Fasching: The piece on the barn side is?

Andy Chamberlin: The piece on the barn side's-

Mark Fasching: Because you're right up against the ground river.

Andy Chamberlin: It's got both because a lot of it got washed away in the '27 flood, so we got a nice good gravel pit in one park. So we've got a mix. Some of it's nice and sandy like this, and some of it is like a gravel pit.

Mark Fasching: Yeah, yeah. Yeah. Which is good for gravel, but maybe not too much else.

Andy Chamberlin: Yeah. It doesn't grow corn [00:31:30] very well. Or hay, even.

Mark Fasching: Yeah.

Andy Chamberlin: You're along with me for this ride. So as the conversation weaves back and forth across several different topics, let's get back to the speed disc.

Mark Fasching: Do you want to look at the disc?

Andy Chamberlin: Yeah.

Mark Fasching: Talk about that?

Andy Chamberlin: Let's go over there.

Mark Fasching: Oh, you can see. We've got a little bit of buildup of material again.

So back to timing of your cover crop. This is such a big tall cover crop that's really getting woody. It tends [00:32:00] to build up between your discs a little bit more than one that would be a shorter cover crop that isn't so woody. So every once in a while... I mean, what we've done, probably 17 acres of cover crop of four- to five-foot tall rye. And this is all I've got for buildup, which isn't too bad.

Andy Chamberlin: So you're not cleaning that out too often?

Mark Fasching: No. This is 17 acres where it's just outside. I think it's just this one. I don't see... Well, there might be one more then it's got [00:32:30] a little bit of buildup on it, but it's not too bad, but it's not doing its job when it's building up like this. It won't... Actually, the disc isn't turning because it's bunched up, so you've got to keep an eye on that.

But these are all sealed bearing discs, notch discs for cutting. At some point we'll have to replace those. They're getting a little smooth. It's got weights on either side and these are very heavy. I don't know what the weight on these things are, but they're pretty heavy. The frame itself is real heavy, so you need a big tracker like this. I don't think 100- [00:33:00] horse tractor could pick this up unless you had a lift-assist kit. This thing is all there, and then some.

On the side here, you've got numbers for setting depth of how far this disc is going to go into the ground. And I've got it on its max setting, which is #8, and then this top one adjusts the float of your rear. In our case, it's a roller. Some of them have baskets that adjust your depth of your rear roller baskets. [00:33:30] So if you look at it from this perspective, that front gang of discs that engages your soil or cover crop is angled at about 30. It's cutting. The soil's going that way. The next gang is opposite that, 30, cuts it the other way. So that's the cutting action of

those discs. And again, the faster you go, the better it works. So a moniker for these types of discs are speed disc, and they really excel at [00:34:00] higher speeds. In our case, 7 to 9. Again, depending on the cover crop, you can go a little bit faster. In this tall ride, I'm probably averaging around 8 miles per hour to incorporate that. If I were to do a second pass, I'm probably doing 5 miles per hour. It's got to go a little slower, but it does a pretty good job of breaking down that cover crop.

Yeah. You can see there's some build-up around the gangs here, and when they do that, then they don't turn as well. That [00:34:30] one's not turning at all.

Andy Chamberlin: It seized up.

Mark Fasching: Yeah. Just because it's got so much material wrapped around it. So again, obviously, every time you use this thing you learn something. And in my case, it's incorporate it when it's a little bit smaller and then you're less apt to have... Or you could also flail-mow. So we flail-mow some rye, which breaks down a bit faster. And if I'm flail-mowing it, then I'm obviously not getting any of this wraparound of this material around the discs. [00:35:00] If you get enough of your disc seized up with all that material around it, then it's not doing its job.

You've got to do a segment on what's in a farmer's pocket because there's key pieces of-

Andy Chamberlin: A knife and a cell phone?

Mark Fasching: Well, a cell phone's a given, right?

Andy Chamberlin: Yeah.

Mark Fasching: But, for me, I don't leave the house without a certain set of tools in my pocket. And when I don't... For some reason, if I forget to bring one or all of them, then it sets me back.

Andy Chamberlin: So what are a few of the key [00:35:30] tools you always have in your pocket?

Mark Fasching: Oh, I can show you. I can lay them out for you.

Andy Chamberlin: Oh, okay.

Mark Fasching: Everyone's different but, for me-

Andy Chamberlin: That might be a good segment to go-

Mark Fasching: Oh, yeah.

Andy Chamberlin: ... forward here.

Mark Fasching: You know that advertisement, "What's in your wallet?"

Andy Chamberlin: Ah!

Mark Fasching: Well, "What's in your-

Andy Chamberlin: "What's in your pocket?"

Mark Fasching: ... What in your farmer pocket?" It's not one of those things where you just jump on it and go, and listen to your radio or-

Andy Chamberlin: You've got to look back to that sometimes.

Mark Fasching: ... or Andy's podcast. You've got to keep an eye on what your implement's [00:36:00] doing so it can work properly. But yeah. Obviously, this for me is feedback. When I'm looking at this, it's like, "Okay. We've got to get in here much earlier so we don't have all of this stuff wrapped around your discs and they can't do their job."

Yeah, that one's in there. So probably the best way to do this is every five acres come out here and-

Andy Chamberlin: Yeah.

Mark Fasching: ... look at this so it doesn't really get bound up.

Andy Chamberlin: In between fields, take a [inaudible 00:36:26].

Mark Fasching: Yeah, exactly. It's all of that materials, that [00:36:30] four to five feet of stem gets wrapped in there, but that's why you carry tools with you in your pocket. In this case, it's a multi-tool.

Andy Chamberlin: It's time for our special segment, "What's in Your Pocket?"

Mark Fasching: All right. So I don't leave home without these [00:37:00] tools. A multi-tool. This is a Leatherman, so it's got various different knives, a little hacksaw blade, which actually comes out. You can use regular hacksaw blades from the hardware store to put in here, so if you want a longer one or a different serrated edge, this comes out, and you can put one in. A straight edge, a little serrated edge. There's something else in here. That's the hacksaw blade.

Andy Chamberlin: Is that a Leatherman brand?

Mark Fasching: Yeah. It's a Leatherman surge. [00:37:30] Pliers, cutters to cut. Those are actually interchangeable. You can take those out. And on the inside, it's got your can opener in case you're stuck somewhere with a bunch of cans of food that you can't open. That's your guy.

Andy Chamberlin: How often have you used that?

Mark Fasching: Or a beer bottle cap. I don't think I've used it. I don't know if I've used it at all.

This is interchangeable. Flat and Phillips. Use this all the time. And you can buy it from Leatherman, a little tool belt with all sorts of different doodads you can pop in there [00:38:00] with different screw size configurations. I use that one a lot.

And the other side is like all, if you're doing repair work, you can thread something in there, either if you're doing sail work, sail repair work or something, but you could use it for anything, really. Flat tip screwdriver there, and a little smaller flat tip on that one. There's not a whole lot of things to that, but that's enough. That's key. That one always comes with me.

[00:38:30] And then, this little flashlight, a little push button. This actually, I can-

Andy Chamberlin: A 90 degree?

Mark Fasching: Yeah, I can... This has a magnet on the end so I can, like if I'm underneath the tractor, want to look at something, I can just pop that right on the frame, turn that light on, leave it there hands-free.

I can place that anywhere on a frame of something. And then, of course, it works at night if you... And I use my phone light as well, but this is neat. That goes in my right pocket.

This is the crux piece; electrical tape. I use this [00:39:00] for everything, taping stuff together. You get it cut, tape your cut together. This gets used a lot. And then just a regular... This is redundant maybe, but I like it. Just your regular little razor blade guy.

Andy Chamberlin: That's not any regular old razor blade. That's a Milwaukee Fastback.

Mark Fasching: Yeah, that's a Milwaukee fastback. That's true. It's got a little clip on the side, so you could clip it on your... But I'm all about putting them in my pockets.

So really, that's not [00:39:30] much. But that and the knife sharpener, a small little knife sharpener blade, which I don't have on me today, but like... So that blade is getting dull, so just to touch it up.

And yeah. I don't leave home without these. And really, you may not need that, but that's a neat handy little thing to have when you do need it in a dark spot. And like I said, it's a magnet on the end of that. Just those few tools does the trick for me. Gets me out of a jam [00:40:00] sometimes.

But yeah. There's been a couple of days where I've totally forgot to put these into my pants pockets for some reason. And I get to the farm and I'm, "Oh, yeah. Got to get this out."

Andy Chamberlin: "Ah! It's not there! [inaudible 00:40:14]."

Mark doesn't go a day without some simple tools like electrical tape and a pocket knife. But he also has made use of some pretty hi-tech equipment.

Mark Fasching: Dabbling around a little bit with auto... Not auto steer but... Well, I do have a auto-steer thing I haven't connected [00:40:30] yet, but Trimble makes a very basic GPS unit that actually you just... It's a screen that shows you the field. You can do boundaries, you can do passes, all that stuff, and you just keep it in... It's got a... What is it? Green in the middle and red on each side. And so, if you're off your line, it goes to the red. If you get back on your line, it goes to green. So you've just got to keep your eye on that if you want to do straight lines for whatever that purpose is. But I use it for boundary too. If I want [00:41:00] to map a field on the fly, I just drive that boundary and it maps it for me and it gives me the acreage. You can save fields, like the cell phone. This could be a separate field, which is saved in the program. I can come here and then bring that field up and play with it from there.

The next step is auto steer on some tractor so actually... You can set your boundary and then whatever lines you want to run and it'll do it.

Andy Chamberlin: Will it plot it out and say, "You'll be done in [00:41:30] two and a half hours?"

Mark Fasching: Probably not. It probably could.

Andy Chamberlin: It could.

Mark Fasching: But... Yeah.

Andy Chamberlin: What would the benefits of auto steer be for you being you're in a five-acre field and not a 500-acre field?

Mark Fasching: They're greater for the larger acreage, obviously. Smaller acreage, maybe not so much. It's nice to have for just a big... Not really auto steer, but just... Well, it could be auto steer, but [00:42:00] if you're got a fertilizer hopper on the end that's spinning out a certain width of fertilizer, and you want to have a little bit of overlap and not gaps, that's nice.

Andy Chamberlin: You can exactly tell-

Mark Fasching: Yeah.

Andy Chamberlin: ... where you're going.

Mark Fasching: You can do that stuff at night with with a screen that will show you what... Because it paints. It paints whatever width of... Say, if you say you can set up and save a fertilizer, whatever fertilizer, like if you've got a cone fertilizer spinner, and you-

Andy Chamberlin: It's got a 40-plus [00:42:30] band.

Mark Fasching: Right. If you know what that is, and you want to have a foot overlap, you set all those parameters up and then it paints your line behind, and it shows it on the screen. It paints your line on the screen so it knows that you're... I mean, if it was auto steer, then it's going to have that overlap automatically. You're not going to have a.... So in other words, if you go down a field, you might... Without any of that, you might have a gap-

Andy Chamberlin: Yeah, right.

Mark Fasching: ... or you might do this sort of thing. So if something doesn't get fertilized, which isn't the end of the world, but that's a good application for it.

Discing in a field so you have a little bit of overlap. [00:43:00] Whereas me, I'm just taking a rough guess and getting it. But over time, that all adds up whether you're off or on. And if you're making fewer passes because you're right on the money, you're saving fuel.

Yeah. It's a neat little thing I'm just starting to play around with, and I think it has some more applications. Obviously moreso on a bigger farm than a smaller farm. But I think it has some application on a smaller farm too. I don't know.

Andy Chamberlin: Yeah. [00:43:30] I haven't looked into it enough to think about it, but that makes a lot of sense, like making more things even more precise.

Mark Fasching: Yeah. Yeah. Yeah, and haven't got to the point... You can get real crazy with sub-inch on the ground. That's RTK is what it's called? Realtime. Realtime kinetic, I think. You set up a base station. Your satellites you're pulling GPS data from, but what it's like some of those are uncorrected. Or some of those are corrected and you can uncorrect them. I forget. One or the other. [00:44:00] But you can also set up a base station on your farm that your auto-steered from your tractor connects to and you can get, literally, sub-inch-

Andy Chamberlin: I was wondering that, because I know most GPSs are like plus or minus 4 to 10 feet. That's not very precise.

Mark Fasching: No, I think it's gotten down less than that. I want to say... I think I can get down six to eight inches with my little basic Trimble Easy.... Was it Easy 250? Easy Guide 250? [00:44:30] Which I don't think they make anymore, but I think it's six to eight inches. Which if you're doing row crop stuff and you want to be precise with an automatic like an automatic weeder or camera-guided system, that's not going to work. You need sub-inch.

Andy Chamberlin: Right.

Mark Fasching: ... right-dialed in.

I also use, we can also... In the future, we can also just talk about camera systems. I have one of the... That's camera capable on that screen. I could do a camera. So I could do a... What I do now [00:45:00] is a camera on one of my other tractors. There's a camera right at the base of the forks? The frame of the forks?

Andy Chamberlin: Yeah.

Mark Fasching: And so, with the screen inside the tractor, I can see when I'm coming down to come into a pallet or a bin, whereas usually it's, you can't see it, and you bang up your bin and all that stuff. That allows you to get... You can see the actual ground level as it's going in.

I've used also a camera on the back of the tractor. [00:45:30] It has enough cable that I can put it into my fertilizer hopper-

Andy Chamberlin: Oh, yeah.

Mark Fasching: ... so I can see when it's getting low?

Andy Chamberlin: Yeah.

Mark Fasching: So all those neat little applications. It's cool.

Andy Chamberlin: I'm Andy Chamberlain and that was The Farmer's Share.

I hope you enjoyed this ride-along, learning about the speed disc and visiting with Mark. If you haven't listened to Episode 3, be sure to check that out to learn more [00:46:00] about Mark, Krista, and their farm.

This podcast also has a video element from the day. So, be sure to check out the show notes and subscribe to our YouTube channel so you can see that video. And don't miss the next one.

The Farmer's Share is on Instagram. So please give that page a follow. You can visit thefarmersshare.com to check out more episodes and interviews. If you enter your email on our website, you'll get those photos and videos right in your inbox when [00:46:30] the next episode comes out.

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Thanks for listening.

