

Welcome, this is the Ag Engineering Podcast, where we talk tools, tips, and techniques to improve the sustainability of your farm. I am your host, Andy Chamberlain from the university of Vermont Extension. And this podcast is supported by Northeast Sare, providing grants and education to advance innovation in sustainable agriculture. We're trying to improve the industry by chatting with farmers and getting their input on tools, tips, or techniques that have changed the way they farm for good. Many of these practices affect multiple areas of the farm, whether it be environmentally, emotionally, physically, or financially, we share the knowledge to promote sustainable agriculture, lifestyle and business. Thanks for having a listen. Now, let's get started. Today's episode comes to you from Brookfield Vermont, where we're interviewing Kyle Doda and Betsy Simpson of 1000 Stone Farm. Kyle has been farming for six years and now he has three acres in vegetable production and an acre in high tunnels. They sell to their own farm store, wholesale CSA restaurants, and even year round farmers markets. And they're bringing in between two and \$300,000 in gross sales, Kyle and Betsy. Welcome to the podcast.

Thank you, Andy, for having us.

Thanks.

So I just framed the stage a little bit about your farm, but how would you describe yourself in one sentence?

We're a small certified organic natural farm, which also focuses on mushrooms, fruit, and egg production.

This episode, we wanted to talk about how you manage your chickens and some practices that you've implemented to make that a sustainable practice on your farm. I first learned about this because you told me you had an automated chicken door. Could you talk a little bit about that?

Absolutely, so we started off this season with 50 laying hens and they were in the field. And part of the whole goal of getting laying hens was to start improving our fertility program. So moving them throughout our fields, as we were done was part of that. However, getting up at five or six in the morning to let them out every morning was becoming a thing, especially when you need to walk 1000 feet or more, you know, all the way down the field, and then back up in the rain, in the whatever weather you might be in. So we started to look into what was available for solar powered, automatic door openers. And we found from Premier 1 Supplies, a poultry door with a solar kit. It was right around 350 bucks and really was life changing for us and the birds. So, you know, one of the main things for them is that instead of when, you know, the farmer comes out and opens the door, all the chickens just rush out because they're probably waiting. Where when the door opens automatically, they come out as they would like to one by one, you know, maybe even two at a time, whatever it may be. So there's definitely a healthier, more natural morning for them, as well as they get used to the sound of the door, so therefore they're kind of...

They're ready to go.

Yeah, they're ready to go, you know.

They're like, oh, it's opening.

It's definitely a lot healthier for us. It allows for us to go out to dinner when the door needs to close at 5:00 or close at 8:00 and we're not home yet. And that also protects them so that we're not late. So it gives us the ability to have a life outside of farming while also taking care of our animals.

And were you getting up that early in the morning anyways? So it really wasn't a burden to go out in the morning or was that a major pain?

So during the summer employees get here at 7:30 or 7:00 depending. So we were usually up, what?

They get here at 8:00, all year, they get here at 8:00, that's wrong. They get here at 8:00 in the morning.

Yeah, we did, okay, yeah.

I get up and let the chickens out.

Oh, okay, okay.

I'm a morning person.

So to answer your question, we were awake usually. It would depend on the year, the time of year. But for the most part, it's another thing to do in the morning besides making breakfast or getting your game plan together for the day or whatever that is. So I think it just allowed... It freed us up for some more time, which is great. You know, some of the things with the solar is that it is ideal that it's south facing. So like orientating your mobile coop, which is we used a hay wagon and then built a coop on top of that, just orientating that so it's south. Whichever side you put the solar panel on. Obviously you could move it if you wanted to, to a point, but not...

Is the solar panel connected to the door?

It is directly connected. It goes from the solar panel to a battery pack. And then from the battery pack to the door, you can also run it without solar, on AC, but then it's not mobile.

Have you made any modifications to it or was it rather simple plug and play?

It was rather simple plug and play. Basically it fits the, you know, standard chicken door size, which is like, gosh, I want to say 12 by eight or something like that, I'm not exactly sure.

12 by eight or 12 by nine, I think.

There is a size for chicken.

There's a chicken door size.

I just can't remember. Anyways, but yeah, no, basically you just bolt it onto the front where the door is with the flush and then you're good to go. It's very straightforward.

Nice, and you said it was like 350 bucks, was that... Did you buy that all as one unit or was the solar panel separate from the door? Like, is it cheaper if you have AC power?

It would be \$98 cheaper. So just the door itself is 260 and then \$98 for the solar kit.

Okay, so if it is on a fixed say barn and not a mobile coop, then you could save a little bit of money there.

Absolutely.

But being solar been awesome because now you have a mobile coop way out in the field and like you said, you were rotating this around your fields. That was the reason, not just for eggs.

Right, the whole goal was to be able to have healthy egg production as well as increasing soil fertility using pasture chickens.

So solar powered, how reliable is it? Is there are mornings that it doesn't open?

Actually, we haven't had any issues so far, as far as it being reliable. It is programmable in two different ways. One can be programming it to a specific time or the other is programming it with GPS coordinates. And then it registers that and knows when the sunset and sun rises, and changes daily to that. But you can also add in a couple extra features, you can do second chance, which is basically like the door will close, let's say at 5:00. But then in five minutes, it'll reopen for another 10 minutes, which is really nice as the chickens get used to the automatic door, so that they go in, and then they start to learn. And then everybody basically is in every single night. You know, sometimes we have found some out, occasional.

When they were first getting used to it. There is definitely some like girls who forgot to go inside.

How long of a learning curve was it?

Well, a couple days really to get most of them. And then there would be like one or two chickens that we would have to throw in. But for the most part...

I would say at the most two weeks, if that.

Yeah.

I mean, and they were used to going in, you had the birds before this door, right. So they were already used to going in at night.

Yep.

And so it wasn't much more for them to get used to.

No, not at all. And you know, the nice thing too, is that you can offset the programming. So you can say it's supposed to open at 5:00 and close at 5:00, then you could set it to open at 4:45 and close at 5:15 or whatever you thought was a little better for the chickens. And it does also really help with predators as well. And that's kind of a big thing too, with pastured poultry is protecting your investment and also, you know, your hens, I mean, that's basically your investment. So, you know, there's a couple other things we've used to help do that.

Yeah, what are some of those other methods to eliminate pest pressure?

One thing that we've done is got the taller netting, the electric fence netting, that is four feet tall instead of three. Also it is... The posts are closer together. They're six feet, eight inches apart instead of, I think almost like 10.

Yeah, the shorter ones are 10 feet apart.

So there's a lot of sagging that occurs as well. And another thing is the... A product called night guard. Which is basically a little red LED light that comes on at night, kind of the same concept, when the sun goes down it comes on. And it's solar power, there's no batteries. And basically it just flashes all night and we put them at different levels around the coop at different heights. We also use them actually on a total side note, but for vegetable production to keep deer out. So for deer, you put it four feet tall, or whatever, three feet tall, basically you want it at eye level for the pest, for the predator you're worried about. And so...

So you have this, it's one of these right here that I'm looking at, we've got one on the table. And it's just a little box, maybe two inch square and maybe an inch and a half deep. And it's this little plastic box with two LEDs on the front and a little solar panel on the top and it self charges.

Correct.

And it just... Like, how fast does it blink?

It blinks pretty fast. I would say, you know, like.

More like a strobe rather than a flashing light.

Yeah, maybe. But basically it's just something that changes and that's enough for a deterrent. Now, if you keep them in the same spot, all the time, predators will get used to that. And then it will not be as effective.

I've never seen one of these before. Are they very expensive?

They are not, I think a four pack was like 40 bucks, 35 bucks.

Yeah, that's pretty cheap.

Yeah. So far so good, I mean, this is the first year we've had chickens on our farm here. So I think there's a grace period. However, I do think that some of these simple techniques will help throughout the period of time and moving chickens, also, I believe helps personally. Just because then your predators don't get used to the same location. It's different.

Yeah, that's true. Is this your first year using these little blinker boxes?

It is our first year.

And so far so good, they've been reliable as well, right?

So far so good, yeah.

I like it, and like you said, I mean for veg production, whatever you could put them on a stake and just stick them around your garden, around the perimeter, around the inside, outside, whatever.

And the suggestion with vegetable production is also to move them. So, you know, every, they say every three to five days, I don't know if we ever did that, but probably like once every two weeks. And you know, in some cases, I felt like it worked, in some cases, we felt like we didn't move it enough or we didn't have enough in the field, you know? And depending on the time of year, I mean, in the fall deer really want those carrot tops. You know, certain things are just not going to change, but.

Yeah, but we had it in like our lettuce field in the same spot for a long time. And the deer loved the lettuce around here. Like they're always getting into the middle of the field and taking all the tops of the heads. And there like wasn't any deer pressure in that field with that.

It worked really well.

Just with the lights?

It worked really well with the lights.

It was a stake with a light on it.

And just to put this into context, we have a one acre market garden at the home farm that is surrounded by woods. Actually it's surrounded by like 400 acres of woods, just to...

So how come you haven't fenced your whole property?

That's expensive.

Right.

So fencing would be quite expensive also just in general. You know, I personally believe that the animals have more of a right to be here than I do. So I would prefer to try to come up with techniques that allows them to still roam freely.

Yeah.

This was their land first.

And now you're just giving them a salad buffet.

Yes.

Salad bar. This way they're still welcome, They're just might be a little uncomfortable with the lights, right?

Right, yeah, exactly.

Is there a big cost difference between the fencing that you use on the chickens? You mentioned you a wide and shorter fence versus the closer together posts and taller?

The starter kit for the poultry netting plus from Premier 1 is with the electric solar panel.

The solar fencer.

The solar fencer, so it's actually energizing the fence, is 460 bucks, which is a significant investment and that's for a hundred feet long. So, you know, just the fencing alone, I think is 167 per hundred foot strain. So really you only need, I don't remember how many solar kits you need for how much fencing, but.

Well, getting the fencer originally is expensive, but.

It lasts a long time.

We have like five strands of the tall stuff. Now it's not worth buying the shorter stuff, in my opinion. Like no matter what your chickens want to fly over it. And it makes it a lot easier for other predators to just like go in because they're hopping over it, it's sagging so much between the poles that are like further apart. Like we did have one strand of the short stuff and that was like, we were like nope, we're done. Like it's not worth it.

Right because you're trying to keep predators out as addition to keeping the birds in.

Yeah.

One thing about the poultry netting also is I'd recommend... Let's say you need 200 feet length for one coop. You're going to want 400 feet, because when you wanna move your coop, you want to already have the next fencing set up. And so that is really, really helpful. Otherwise you're trying to do it while they're still inside in the dead of the morning. It's just not as easy. Like it's way easier to get up early in the morning, go move the coop to the new spot, and open the door.

It's worth the extra 200 bucks to have the extra fence, so you're not

Yeah.

Stressing in the morning and scrambling around and tripping over yourself.

I mean, at the end of the day, everything is going to cost some amount of money or time. So you can pick one, in which direction you want to go. But I think it's a lot easier to keep it simpler because we have a lot of things that are not simple to deal with.

Are there any things that you do now, that it's wintertime, differently than in the summertime? How do you manage your chickens in the winter?

Absolutely. In the summer we have five gallon buckets with nipples on the bottom for the chickens that they have access inside and outside. But during the winter with freezing temps, we've found a heated poultry waterer. That's a three gallon it's \$54. And the major thing for us is that it goes as low as negative 20. A lot of them that you find only go down to 10 degrees, which here in Vermont is basically useless for the winter. The only thing that I can find is that because it's three gallons, for 75 birds, ideally having two or three of them would be ideal. Or like one per 25 birds, let's say. It really depends on how often you want to refill. The only other downside I found is the water doesn't freeze inside, however, the lid freezes shut, but it wasn't that bad to get off, so. That's the only thing that I found that I didn't like about them.

So that would be a benefit to at least have a second one. So you can bring it in and rotate, warm it up, clean it up, whatever.

Absolutely. And you can use them during the summer as well. You can just unplug the electrical and just use them during the summer. They are an AC powered heater. So you couldn't do it if you were without some sort of power.

Right, you're, that's one thing to note. That your chickens are kind of hunkered down for winter. They're not bouncing around the field. You're not out there dragging the mobile coop, to different locations.

Correct, correct.

Now the water bucket, did you get that from Premier 1 as well or not?

We did get that from Premier 1 as well. And there is one other thing that we... One other issue that we have in winter is freezing eggs. And so one technique that I've been working with so far this winter is using what is pipe heat tape, to keep them above freezing in the morning as they're laying. And so we have rollout nesting boxes where the eggs are protected by like a plastic sheet as they roll out. And right underneath that plastic sheet is where the heat tape is, which it really only runs when it's cold enough. So you're not spending excess money just running it all the time. And it doesn't get crazy hot, but we do not have any frozen eggs so far.

That's great. Now did it have the plastic covering over it or is that a modification you did?

The plastic covering comes with the rollout nesting boxes.

Okay, cool.

It keeps the eggs cleaner. So because there is a roost there that they can also roost on, so it just makes it so that the manure's not going straight in onto the eggs.

Nice. So I take it that's probably sped up your cleaning time. Did you have that rollout box from the beginning or no?

Yes, yes we did.

One other thing with the rollout box, which is from Stromberg's, is also I recommend everyone gets 10 extra pads. They're the inserts that go in the nests instead of using straw or hay, they're plastic inserts that are cleanable. So if you have 10 of them, there's 10 nesting boxes. You just pull out the ones that are soiled and then put in new ones and then you can clean the ones that are soiled without disturbing the chickens. And they can keep laying and doing their thing.

When you are ordering the fence and fence controller and stuff like that from Premier 1. Now I know they have a big catalog and I've seen them at trade shows and they have a website, can you order right off their website or you have to call? How do you shop from them?

Straight off their website is the easiest way to do it. That's how I've always done it.

Straightforward, easy enough. Good, I haven't been on their website, so I didn't know. So this was your first year with chickens on the farm, right? How is it going? Is it serving your fertility needs? Because that's the main reason you got them.

Yeah, so this is the first year that we've had chickens on the farm. And the main goal was that we wanted to be able to start producing our own manure, on farm. However, I didn't want to spread it myself because it takes more time and money. So having the ability to move chickens through our fields in the fall as we're finished, was our goal. Currently this year we only got through probably, oh, I don't

know, a quarter of our fields, which is why next... This season I should say, we're running two coops was 75 birds each. That way during the fall we can move them simultaneously through the fields. So as an example, they started in the asparagus field and then moved to garlic and the rest of the alliums, and then slowly to the other fields as we move through them. But before we can actually get them into a field, they are, this coming year, going to be foraging on cover crop and rested soil. So because we have six to seven acres tillable, the other three acres or two and a half, depending on how it goes, will be cover cropped with our chickens grazing.

So yeah, you're doing it again. You're doubling up.

Yeah.

Yeah.

Do you have a market for that many eggs in this location?

Yeah, absolutely. We sell our eggs here at the farm store and then we have an add-on for our CSA members, and then we wholesale them to Farmers to You, as well as we've had requests from other co-ops and restaurants. And then we sell them at farmer's market as well.

So it doesn't seem like they've been too hard to sell.

Not at all.

Well, that's always good.

It is.

So the chickens go out into an area that's been picked through and you're done for the season. You use plastic culture to some extent? Do you put the chickens in there after you pull all that up or you just let them go through and deal with the plastic later?

We pull the plastic first.

Yeah.

And then let them go in. Which seems to work just fine. I think it would be quite a mess if we left it.

Yeah, I would think so as well, but are you giving them any other food to eat or is, you know, the onion scraps their diet for the next period of time?

So we provide them with organic grain from Morrison feeds and then we also provide them with food scraps from the farm pretty much daily, depending on the time of year. So we use organic pelleted feed

from Morrisons as well as organic corn scratch, which gives them a little extra something to play with. It's like chicken crack. They love it.

But yeah.

How big of a area are they in and for how long?

So usually it's about two weeks and it's about let's say 4,000 square feet, two to 4,000 square feet depending on the field. But I would say average is probably around 4,000 square feet. If it's a smaller field, you know, then we will shorten the time, but I, you want to see even disbursement of the poop so to speak. So one of the concerns, or one of the thoughts I've been having is when it's really sunny, they want shade. So the problem you run into is that they're hanging out underneath the coop.

Oh.

And ideally I don't put the coop in the center of the field or it's on like a work road and then the netting is open to the rest of the field. So what I'm working on is maybe possibly a lightweight, movable, shaded structure. It does put more time and effort into my end of the deal. However, I think that in the end, two things happen one, I think we have better fertility and two, I feel a little more sane about sustainable farming.

And you're not just fertilizing the driveway.

Correct.

So you move them a little bit based on even distribution as well as watching like how fast they're breaking stuff down or do you just move them when the next bed's ready?

So one thing that you also have to keep in mind is that you cannot harvest a crop within 120 days of raw manure application, which is why they basically, well, that's why we don't let them graze until the field is finished for the year. Because of how short our growing season is. I mean, 120 days is the entire growing season. I think that the process of understanding their habits and patterns, and watching them graze is definitely something that we will improve on over the years. And I think that also, you know, we will get a better flow with them, because you're not only then matching your...

And we also need our soil test. Like we have to take soil tests in the spring of the fields that they were on and like seeing what kind of impact they actually had and be like, okay, they were on that field for this amount of time. Like maybe they should be there longer. Maybe we should pull it shorter and like move them faster. Like it's all things that we need to look at more in the springtime when we do the soil tests.

So that's data that you don't really have yet to know.

Yeah, correct. It also is based on our management plan for the following year, for what crops are going into the field. So let's say we want to put carrots and beets in a field. Well, we're not going to want as much nitrogen. So maybe we only want to let them graze for a very little short period of time or maybe not at all. Maybe it's just cover crop. So all of those little nuances play into the decision making. So like as an example, if we are putting them into Nebraska field, we may want that nitrogen. So then we're going to let them graze longer.

Well, thanks for sharing some of your tips and ways that you have found how to make raising chickens sustainable on your farm.

You're welcome, thank you guys.

Thank you, Kyle and Betsy for being on the show. If people want to learn more about you and your farm, how can they follow along and get ahold of you?

They can check us out on Instagram or Facebook, 1000 Stone Farm and they can also check out our website at 1000stonefarm.com and email me or Betsy at Kyle or Betsy @1000stonefarm.com

Sounds good, thanks for coming on the show. I hope you have a great day.

Thank you, Andy.

Thank you.

Thank you for listening to today's episode. I hope you go ahead and subscribe. Share this with a friend or leave us a comment. And if you want more information, check out the show notes on our website at agengpodcast.com. That's A-G-E-N-G-P-O-D-C-A-S-T.com. Thanks for listening, I hope you have a great day.

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