

Principles of Cell Grazing with Rodger Shannon Episode 12

Transcription:

Daniel: Daniel OBrien here welcome back to greengrassseggfarming.com, my special guest today is Rodger Shannon from [Carbeen Pastured Produce](#), how are you today Rodger?

Rodger: Great, thanks Daniel.

Daniel: Alright! Today we're going to be talking about principles of cell grazing, Rodger's got a farm with sheep, with cattle, with egg laying chickens and cell grazing is something you've done for awhile Rodger and from my opinion, it's something you do quite well, I think some people touched the cell grazing and they do a bit of it but from my opinion you live it, you do this everyday and you understand some of the fundamentals. That's why I call this podcast "Principles of Cell Grazing". Do you want to start Rodger by telling us what is cell grazing, so if someone bought a farm or they about to visit a farm, what is cell grazing?

Rodger: Cell Grazing is the mobbing up of ruminant animals, so what we're doing is we're basically mimicking what would happen naturally in nature by putting these ruminant animals which are herbivores, so in the wild they would be the buffalo, the bison, the wilder beef, all those ruminant animals that ate grass and walk across the grass planes of whatever country we're talking about.

Now following those herbivores and keeping those herbivores totally bunched is predator animals, so your lions, leopards – whatever, by keeping those herbivores all bunched in together for protection and what this actually does is get those animals moving across that land in a pace so they're eating this grass on cut only on the savanna lands, their eating it once, trampling into the ground, urinating on it and putting their manure on it and moving on, they're not hanging on this grass and taking a munch here today and then coming back tomorrow and they all have this bit of grass tomorrow.

They're moving very quickly across the landscape and not coming back for a long period of time in which time that plant gets to recover so what we're doing in an agricultural sense is using animals that we use in agriculture to eat our grass so they are ruminant animals they're sheep and they're cattle, we're doing a fine thing, we're bunching them up, we're making them eat that grass quickly and moving them on so that grass can recover, we've put that fertility back in the soil through the urine, through the dung and through that trampled grass.

We then allow all the soil microbes and bugs to use all that fertility, put that back into the soil in plant available form, the plant takes up, recovers, grows up to it's maximum height that we allow it to and then we bring the stock back in, so that's pretty much the principles of cell grazing, we replace the predator with an [electric fence](#).

Daniel: Ok, so you don't have lions running around your farm chasing your cattle?

Rodger: That's right no.

Daniel: So you use [electric fences](#) to keep them moving?

Rodger: That's right yeah.

Daniel: On the flip side let's just say whether on the farm or whether in Africa, you took those predators or animals away and in your case you took the [electric fence](#) away and just let the cattle and sheep to walk over the whole farm go where they want when they want. What's gonna be the difference for the animal, for the land, for the whole environment?

Rodger: What we're immediately going to have is we're going to have those animals be selective on what they're going to eat. They'll gonna come in and they just gonna be like humans, if we have a choice everyday, we're gonna go to the ice cream and get the ice cream before we go to the salad, before we go to the leafy greens.

You know it's good to get a little bit of ice cream every now and then but if they constantly going back and picking an ice cream, it's no good for the health of the animal and also no good for the plant because that animal's gonna keep coming back to that ice cream plant because it is the most palatable and they go "Yup, I love that one, I love that one" and they'll not gonna let that plant to recover and rejuvenate itself. So you're actually going to end up killing that plant and the plant instead be a less palatable for that animal are going to take over that spot, we're actually going down in our order of succession.

The order of succession, starts up with annual grass or annual weeds and then build all the way up to woody plants, to trees. What we're trying to do is keep our order of succession around a perennial grass, that is our optimum for performance in terms of dry matter production and animal performance so the more that we graze an individual plant and allow that animal to, we're knocking back down the succession order and we're going to annuals and weeds.

Daniel: So with the real life example what it could be is going back to your backyard and you've got a lemon tree and everyday pruning that lemon tree until it's a stump and it dies because it actually doesn't have the chance to recover because you're just pruning it everyday rather than prune it and then come back after a year after it's full of lemons, pick the lemons and pick it again maybe.

Rodger: Yeah probably the greater example would be, if you walk across one section of lawn everyday, you never need to mow that lawn because you've mown the a bare patch you're taking that order of succession all the way back down to bare dirt.

What I'm going to grow there if you don't walk on it for a week, you gonna see weeds starting to merge on that bare pats, where-as around you where you've rested it enough, you got a nice lawn that you can maw, once a week depending on the time of year.

Daniel: So by putting all the cattle together, moving them quickly, they'll gonna eat everything because they come into a paddock that they eat this so-called ice cream plant that was yummy but then they don't have any choice, they have to eat everything else there.

Rodger: Yeah, there's a very quick time. It's quite interesting to actually when you put them into the paddock to see what they're doing, they will come across and the first thing they'll do if they'll walk right across their paddock and munch what they want to first – they go "Yup, this is beautiful, this is what I want and I will be very selective on the first couple of mouthfuls" once they've done a walk of that paddock they'll then come through and go "Right we're hungry" they'll start to go through what else is left on that paddock and then by the time that they're finished on that paddock they'll have evenly graze that paddock, pretty much taking out whatever they can to those edible.

A lot of what is not edible will then be trampled and you're adding some dung on so we're creating a little fertility patch on that spot that wasn't palatable, that allows those more palatable species to create an environment for them to germinate and grow on that spot.

Daniel: On your farm, just like a real case study, you work the cattle and the chickens together, is that right?

Rodger: Yes, we take the cattle in big mobs – we're running at the moment, 260 hectares in a mob to 200 cows in a mob so we move them to an area for a day or two days at the moment in Summer time when it's quite dry we might take that up to three days but never more, because if we take it more than three days that is when we start to mow that succession order and now they'll take a second bite out of that more palatable species, which is just sending up it's new shoots, we want them to be able to send up their new shoots as soon as they can to allow that recovery rejuvenating period to be on the way as quick as possible.

So we move that long depending of what time of year it is, we'll move out chickens in three days down to a single day on summer time because of the heat and it has an effect of baking the dung, we find that we need to move our chickens in really quick to allow them to be able to get in the manure and spread it out and take all the parasites and bugs out of the dung, the parasites that they don't take out on the process will still be killed because of the sunlight.

So the chickens move quite quickly, in doing it that way we also don't have to put up the [chicken fences](#) because the chickens are never used to these surroundings, the only thing they are used to is the trailer, they'll only run a certain distance away from the trailer every day, the longer we leave them in the paddock the further they will run away from the trailer because they'll start to get a little bit adventurous, they want to try this and go "I might just look over here today" – they are still not too far away from the trailer, they get a little bit more adventurous in what they're doing the longer you leave them in there. And doing that you'll make them more susceptible to predators and it also means that they might be long piece of grass over there, they might want to build a nest over there.

Daniel: Yep so keep them moving and so we give people a picture, when you bring 200 head of cattle in, what sort of area are those cattle in for one or two days?

Rodger: It really depends on the amount of feed we have on offer, in our situation at the moment, they'll probably grazing 260 hectares at the moment on one and a half hectares a day.

Daniel: When the chickens come in there, do find those chickens cover those one and a half hectares quite well?

Rodger: Yes, I know that one trailer will cover one hectare in a day so on that one and a half hectares I would have two to three trailers and that will do until they cover that space.

Daniel: Yeah ok, just so people know because there's some people, they may only have 20 or 50 acres, what is the size of your farm that you use for grazing?

Rodger: We've got 549 hectares on our place which is 1,400 acres and we're currently grazing in three mobs of cattle and our rest period in the moment, we're just coming into Spring is 10 weeks at the moment and probably be shorten down in the next three weeks down to 30 to 40 days. So what we are aim is when our feed is growing fast, we want to move our cattle as fast and get them across the country because we want to keep our pasture in a vegetative stage for as long as we can.

So that's working on sigmoid growth curve, we want to take our plants from the top of the S back down to the bottom of the S and then bring them back in when it gets back to the top of the S so in spring it goes very quickly up to the top of the S when moving cattle very quickly. We'd probably leave more vegetation on the ground and just go "just take the top off, just take the top off, just take the top off" and then as the spring slows down we can then slow our cattle down and we can reduce that down and allow our growth to start waning, as it naturally does.

Daniel: When you bring the chickens in, the cattle have already eaten it down so the chicken's role is to spread out the cow pats so they're not just in one big pile, that spread that out, they're getting the parasites and any bugs and beetles that are in there, the chicken is also eating grass and putting down nitrogen. So what have you found in

between mobs of cattle that you're not following with chickens and once that you are, can see a noticeable difference?

Rodger: Yeah you can, the paddock's looking a lot more patchy and you'll get that extra boost by putting the chickens in. You have that extra fertility that chickens are bringing into the system and it's different manure and it's just a different achievement and it's really noticeable, the effect on the pasture and the way that we do it, bringing those chickens in straight up for the cattle means if that grass is those chickens doing, is that a height that's perfect for the chicken?

Daniel: Yes!

Rodger: You know, they loved that freshly emerged leaf, that's just the most palatable for them, they're not a remnant so they can't ferment the long lignified grass in their stomach, what they need is short bit of grass that they can grind up in their stomach and use, they're very much an omnivore so we can't expect them to go in onto a big paddock full of long grass and go "Oh look this is beautiful for chooks" it's not, it's not really, there might be some bugs in there but they're not gonna touch that grass.

Daniel: So in this mix, where do your sheep come in? Do they graze over the same area that your cattle and chickens have been through?

Rodger: Yeah, so we'll then bring out our sheep after our chooks, depending on the time of year so it's probably coming to about 21 days on the spring and that allows three weeks and a plant will put up three leaves on that stage and on that stage that is just what the sheep love, they love pasture that's not too high, not too short and just nice and fresh, they love that fresh grass, they don't like it over their head, they like it just in between heights, in between where the chooks like it and the where the cattle like it and the sheep run through and then we give a long rest period before the cattle come back.

Daniel: So how long do you have the sheep on that area for?

Rodger: We don't actually put the electric fence up for the sheep when we first started we were doing that and found that sheep just constantly looking at the other side of the electric fence and they go "Oh that pasture looks fantastic" and jump over the fence, they don't like being mobbed up as much as the cattle do, we found that running less sheep and running them quickly to a larger paddock, work's better for us. When we first started we we're running, we had 700 ewes on this place and we downsized that to about 200 and that's 200 sheep will run through a 20 to 30 hectare paddock in a week.

Daniel: Ok, so after they've been through because it sounds like quite a large area for that many ewes in a week, can you see a lot of difference where they've been?

Rodger: Where the sheep have been?

Daniel: Yeah, do they take a lot of grass off?

Rodger: Sheep can eat a lot of feed, that's why we don't run them on really high density because it will just make too much impact.

Daniel: So you want them to just take those leaves off, because it's only been three weeks earlier, potentially the chooks have been through, you just want them to go through and grab the good feed and keep moving fast.

Rodger: Yep that's right.

Daniel: And then after the sheep have been through, it depends from season to season, what are you looking for before the cattle go back in again?

Rodger: So we want to get it up to the top of that Sigmoid growth curve, how we're starting to see some stem elongation, some feed head starting to emerge, that's the perfect time for the cow to come in and knock it down, which had the perfect amount of growth on them and you're putting the most amount of energy into that biomass for the cow to use.

Daniel: So basically the main points are, move your livestock quickly but move them similar to the rate of the growth of your pasture so in spring time you've got a fast growth so you move your animals faster and in winter or dry times you'll move them slower, is that correct?

Rodger: That's right yeah.

Daniel: Keep them close like the cattle with [electric fences](#), you have been there one to two days or maybe three. The chickens come one to three days later, again that depends on the season so in summer you're saying that one day you only have one rest day or is it the very next day?

Rodger: In summer time, it tends to be the very next day, we find the dung really bakes off quickly in our heat here, if you're in a more humid and overcast environment you can probably delay that for a day and just to layout that fresh shoot to come through for more benefits for the chooks, but in our situation where we quite often have dry hot Summers, or dry/hot periods anyway, that's when you wanna keep them moving really quickly behind the cattle and in order to do that, you don't have to move every trailer every day, you can use a "leap-frog" system if you got more than one trailer.

You might play one trailer in one spot in two days but then you're "leap-frog" and you got it directly behind the cattle for the next one so you're only moving one trailer everyday, just to cutdown in the time you spend moving trailers around.

Daniel: So the trailer will sit there for two days because you're using a two trailer technique and you're actually driving past the first one and again the following day that second one is driving past the one in front to catch with the cattle.

Tell me quickly, you've got your meat chickens, tell me how you cell graze them because I take it they're in enclosures where they've got access to the pasture so you're moving them along, how do you do that?

Rodger: Yeah so they're in movable hutches so the hutches are three and a half by 4 meters with bottomless floors so they get access to the patch and they just move on forward everyday.

Daniel: And what do you find? Because obviously they're putting down a lot of manure in a small spot, what's the pasture like where they have been?

Rodger: It comes back very rich, when you do it on your meat birds you can't come back into that spot for another year at least just because of the nutrient load you put down. We just run them over, we run them over areas or our place that requires the most amount of fertility, it's probably the most degraded.

They are our real fertility creators, the meat birds. So we'll move out our cattle or our sheep to an area and really knock that pasture down to get it down to a level that is at the right height for the chickens and then move the chickens in and cover that area once a year.

Daniel: And how many enclosures have you got for your meat chickens?

Rodger: We're just building up into our second production near this year, we're going up to two hundred birds a week to be processed, that's a thousand meat birds on pasture in a one stage and you're running roughly a hundred birds in each hatch and there are 10 hatches.

Daniel: And those hatches, they're only moving their length everyday is that correct?

Rodger: Yeah just their length everyday.

Daniel: In the whole scheme of things, you're certainly not gonna cover your whole farm by having 10 meat chicken hutches but as you said if you can focus on that land that needs the most, you can bring it up to speed quite fast.

Rodger: Yeah that's right, it depends on what you're trying to achieve on your farm I mean that's what you're really need to look at when you are going into these things is "What am I trying to achieve with my animals?". It doesn't all come down to profitability. What we are doing in our place really starts off with an ecological base to start with.

How does this animal perform? What are its functions? For a cow, it's really to turn or carbonaceous materials into meat and into fertility for the soil and the sheep's the same on a different scale, they don't have the size and their dung is not a cow pie like, the cow's just have a nice little pie they leave for the chook, whereas the sheep leave their dung everywhere. So that's why, the sheep don't poop in one spot they lay their poop

everywhere so it's good to have them behind the chooks and a lot of the parasites from the sheep can be killed off just by simply by sunlight because it's not in a one big pile which is great for the parasites to stay in. So with the meat chicks we go "Right, what do you actually perform? What is your function on this place gonna be?" you're in a brooder for three weeks so you're immediately making a compost pile – you then go out on the pasture, what is your role on the pasture?

Apart from the fact that you're gonna produce beautiful meat for this being right on pasture cells, it's got the great omega three to six ratios and it's full of all these extra nutrients which you don't get from chickens in the shed.

But what are chickens really good at? Eating, sleeping and pooping, if I keep them on a small area for a day, I'm really gonna be able to manipulate the fertility on that spot. That's the kind of things you just need to think of when you start looking at these systems, it's looking at the animal and how it can perform for me rather than – "I'm going to produce beef to make me the most amount of money" and I think that's why we get lost in agriculture at the moment, we just need to take that step back and go "I'll gonna make this animal work for me, not how do I push this animal to produce most amount of beef to make me the most amount of money" that will come with it, you've just got to get your functions in place and work out how that animal functions on your place before you get there.

Daniel: So typically in your area, we're talking about large acres, what are most people doing around your region, I don't imagine they've all got egg laying chickens, meat chickens, sheep and cattle in a cell grazing or a one day move them quickly, typically what are the traditional way in your area, how are they farming or what are they farming?

Rodger: So traditionally around here, we're traditional mixed farming area so there's a lot of sheep and cropping. Cattle is really not on a large scale around here, crops around here are wheat and canola, in rotation they'll probably put lucerne in the rotation and put notion back in the soil and give a pasture face and that's where sheep coming to it. It's amazing the amount of people that see us having chooks on our place, and they think it's great but they just don't get the principles behind it.

Daniel: Yes, they don't fully understand the big picture on why would you do that again.

Rodger: And we've just gone through weather – most rainy of june we ever had and now lay rates just completely gone at the backdoor, we had 20 days of rain, in a month where you have the shortest day and the chooks just went 'no thanks' and when you talk to people and imagine the people go "Have you ever thought of just building a shed and putting them in there?" and I go "No, no I haven't".

Daniel: No hasn't cross my mind and you can see back in the days, we're probably going back a hundred years ago, all egg laying chickens they would have been free range or maybe it's a bit more than a hundred years and then over time they probably brought ideas like "Hang on, a lot of wet weather affects them a bit so let's put them in a shed and

let them run at the side and then they go oh they're running at the side they still getting wet, let's just keep them all closed and now they're walking around with their manure, and they went "I know we could put a mesh floor underneath them and the manure will drop through" and they said "Great idea" so over time through innovation they create something amazing it's called Caged Egg Farming.

You need to take a helicopter view and zoom out and they'll go "What have we created here?" Yes it's great for you to have a good system so they'll not walk around with their feces but go back to how they used to do it in a big picture and it sounds like that's what you've done with your farm you've gone "What is this animal good at? How can it work with the next one, with the next one, with the next one" as opposed to "Let's just build a big shed and throw all the chooks in there".

Rodger: Yeah that's exactly right I mean these all really started back in the second world war where the industrial farming took off because what happened was there was a huge labor shortage and there was a huge demand for all this product, because you had to feed the people on the frontline, you have to feed people at the army and all you have was the women pretty much and the older men that left at home to make this and they'll go "What happens if we do have these wet period and the chooks are gonna lay the eggs, they said "oh put them in the sheds", and so on and that's how these things sort of steam rolled but immediately when you do that you're not looking at the chickenness of the chicken, you're looking at the chicken as a means of getting food and that's it.

Daniel: Yeah it's a little egg machine, where should we put these little egg machine?

Rodger: They're pretty much on the production side – the chooks pumping those eggs out and you really need to take that step back and go "Woah, what's the point of having a chook if all it's doing is pump an egg" it was put on this earth with claws and really good eyesight and a beak for a purpose, how can I utilise that to the best of my farm if we look it that way, we start having more componentry system in our farm and not just production models, so if everything can work in together the sum of all parts is greater than the production of one.

Daniel: And just to finish up, because you do cell grazing technique rather than just let all of your animal just walk anywhere on the farm, the carrying capacity – do you think it has increased now and you can run more or less animals because of using this system?

Rodger: Oh we definitely run more, when we started that was four years ago when we first move here, in the first year of our production we ran 400 ewes, 200 steers and 50 cows plus it has 50 hectares of crop, the crop was an almost a failure that year, cropping went out after a year and production now is – we're currently carving down 560 cows, we have 200 sheep on 200 ewes that we lay them down twice a year.

We always have followers with those sheep, if we'd say we're almost running at the same number of sheep that we had, just probably a little bit less because the lambs aren't quite the size of the grown ewe and we're also running 1500 laying hens and a thousand meat

birds on the ground at anyone's stage and they duly passed it, I'm not sure how to put that into a DSE basis but they do add to what eats pasture, if you look it that way we are running a lot more stock than what we were.

Daniel: Yeah exactly and the point I'm putting across is when you do this right, you'll have a better farm and when you have a better farm you'll be able to run more stock and if someone is looking at from the figures of like "Does it actually make more money if you do it that way?" well it won't first week maybe but if you'll look on the long term "It will" because suddenly you've got a better farm that could handle more growth, that can handle more livestock so the better if you manage it.

Rodger: And it becomes more resilient and you don't have any outgoing cost, we don't put fertilizer on here, we don't put any chemicals on our farm whatsoever, we don't have to drench our sheep, we don't have to drench our cattle. You're taking all the cost out of your system that you'd be paying some pharmaceutical brand to be able to do that, running in a conventional method. So your bottom line actually increases as well as the extra production so it's a win – win on both fronts.

Then you're also vertically stacking enterprise on the top of that, so you're just building up your cash flow in situations where there's no downside, the only downside is it requires more labor but I'd rather invest in people and time than I would pay some big company to put an artificial solution on my place.

Daniel: Yeah which is temporary anyway it's not a solution that's sustainable for the long term – not like you put it on once and it's all good for 10 years – as soon as you put it on once it's like an addict you need to do it again and again and again to keep it up.

Rodger: And it's a compounding addict, you have to put more on to achieve the same result.

Daniel: Yeah, well thank you so much for your time today, we've covered quite a bit, I hope this has been very helpful to everyone listening about the principles of cell grazing. I'll put a link to your website there Rodger, so people can find out more about your farming techniques also see some photos – you got some beautiful photos up on your facebook page and also on your website.

Rodger: Yeah no worries thanks Daniel.

Daniel: Thanks for your time.