

Transcript of Episode 015 of the Plants Dig Soil podcast – “Season Review and Listener Feedback”

Hello! This is Scott Gillespie and welcome to the second season of Plants Dig Soil. In this podcast, you will learn ways to transition from conventional to regenerative practices in agricultural, horticultural, and home gardening systems.

[Transition Music]

While most podcasts take the summer off, I like to follow the rhythms of the growing season and take time off in the winter. It's a time to take a break from the everyday stuff and get into a lot of the reading that I've wanted to get to all summer. In this episode, I'm going to review the season so you can remember all that I've covered and maybe go back to a few of the episodes to listen again. I also want to hear from you – my listeners – and get a feel for what you like and the type content of which you would like to hear more. I'll be giving an incentive for you to share me your feedback. The details will follow at the end of the episode.

I started the year with an episode that was all about plants as soil amendments¹. The idea for this episode came well before the realities of Covid-19 set in but it ended up being very prescient. We are so used to just going out and buying things when we need them. Gardeners found that seeds were hard to find this year. Were you prepared for that? I was fortunate to have already had my supply but it caused me to start thinking about learning how to save seeds and to build up my inventories so that I can go one year without having to buy them.

In the episode, I talked about making plants your main soil amendment and not looking to outside sources for your amendments. Compost and manure are common staples of garden amendments. Unless you have local sources, they require long supply chains to get them to you. Seeds, and the ability to save seeds, can close the loop. You can have all you need in your own garden. In the episode, I covered three staple cover crops that all gardeners and farmers should be using: fall rye, hairy vetch, and mustards.

Next, I tackled a subject that most people cringe at – statistics.² They are critical in helping you to understand product claims and new practices. Just like you don't have to understand how your car works to be able to drive, you don't need to understand the math behind statistics to use them. I used coffee shop examples of neighbours talking to illustrate the fundamental tool that they provide us with. At a glance you can tell whether something is likely a real effect or whether it just came about by chance in the variation of the numbers.

I also provided some tips to spot misleading tactics that I've noticed companies use. In the episode, I worked through a real-world example where a product was tried on 18 farms. The product gave statistically significant yield increases in only one location – what's to stop a company from only showing you that trial and ignoring the other 17 where there was no effect?

I've also seen brochures that show university-run trials, without statistics. Being done at a university doesn't make it valid. And, finally, the greatest misleading tactic I see is putting up pretty pictures on social media. What company will put up something where their product didn't

win? I can pick all the good plants in my field, put them against all the poor plants, and then make any claim that I want.

In May, I went beyond cover crops³ to help you look at some advanced ways of making cover crops work and therein keep the soil covered at all times. I define a cover crop in the defensive way – it's there to hold the soil in place, grab nutrients at risk of leaching away, and defend against weeds moving in. It becomes a soil crop when it goes on the offensive, such as drawing nitrogen in from the air, mining nutrients from the soil, or reducing pathogen loads in the soil. From there, I looked at different techniques to refine the process such as using rely crops, inter-crops, and companion crops.

For the next month, I spent the entire episode looking one very advanced practice – planting green.⁴ The idea seems to have originated in the Southern and Eastern areas of the United States and involves planting directly into a living cover crop. In organic systems, it is typically terminated by a roller crimper just prior to, or not long after, planting. In conventional systems, herbicide can be applied as late as when the cash crop emerges if there are strong products available. The main purpose is to have a mat of residue to prevent weed growth. The other benefit is maximizing the time that you have green cover on the ground.

In the episode, I argue that your goal shouldn't be to replicate this process. Instead, it should be to do what it takes to get your crop established quickly. In the areas planting green works, there are long shoulder seasons of mild temperatures and adequate rainfall. In my area, the Canadian Prairies, we have long, cold winters where nearly nothing survives. Even if we used fall rye and had something growing in the spring it may not be beneficial if it's used up all of the soil moisture.

In July, I switched gears and talked about my own personal experiences in dealing with a bylaw.⁵ As long-time listeners of my podcast will know, I use my yard and my vegetable garden to try out the regenerative practices I learn about. It gets messy sometimes and though I know what's going on, it's hard to explain regenerative practices to others. I wasn't really sure how many people would relate to this, but only a week after the episode dropped, I had a farmer mention how he had to mow down an experiment because bylaw enforcement was after him!

In August, I covered a topic that was on the minds of most farmers in the late summer – what should I plant after harvest? There are many cocktail mixes of cover crops out there but I advocate for starting slow and simple.⁶ It's okay to put a mix out and see what grows, but don't try it on all your acres at once. In my experience, no matter how many species you start with, 1-3 will dominate the mix. Why pay for the stragglers? Or, if you are going to try a cocktail mix, try different seeding rates and ratios. Perhaps the dominating ones don't need to be applied so heavily.

[Transition Music]

Before moving on I want to take a little break from the podcast review and highlight something that happened in August but was only posted a few weeks ago. As you can gather from the podcast, I love to teach, and I love to share my knowledge with anyone who will listen. The

province that I live in, Alberta, Canada, has “Open Farm Days” every year to let the general public get onto farms and see how they operate.

The local farmer lead research and extension organization, Farming Smarter, participates by showcasing agricultural research and has an area setup for businesses tied to agriculture to setup a booth and talk about what they do. To make sure the event is accessible to anyone they also took video of everyone giving a short talk about what they do. I’ll link to the video⁷ in the transcript if you want to watch me. Check out the other great organizations that were a part of the event by looking at the playlist.⁸ Fortunately Covid was at low levels at the time and being an outdoor event with lots of space allowed everyone to enjoy the day and keep proper distancing.

[Transition Music]

Up to this point, most of the episodes were on the practical side of regenerative agriculture. What cover crops should I grow? How many species should there be? Can I advance my practice to soil crops and get them working harder? In the fall I turned to something more on the business side of regenerative agriculture, and a controversial topic at that – soil carbon sequestration⁹.

On the surface (pun intended, of course!) it seems straight forward. By following regenerative practices, a farmer should be building up organic matter and this should mean there is more carbon being held in the soil. If farmers are capturing carbon dioxide (CO₂) why not pay them?

As I said, on the surface, or when we measure the surface layer, it appears that this is true. There is more carbon in the top 30cm (1’) when cover crops are used. Almost all models base their payments on this. But new studies are emerging that show that when you look deeper, there’s no net change. Cover crops tend to concentrate carbon near the surface and conventional management tends to distribute it over 90cm (3’).

A big part of the episode was explaining the idea of faulty accounting. If you isolate on one area you may make it look like it is regenerative when in fact it is not. Looking only at the top 30cm can make cover crops look regenerative. However, the 60 cm (2’) below this layer has less carbon than the conventional system. So, when looking at the entire 90 cm the conventional is equal to the cover crop area in terms of soil carbon sequestration.

Another example of faulty accounting comes in applying compost: It can appear to increase soil carbon sequestration, but this is merely transferring carbon from one area to another. The compost is a concentration of leftover carbon and nutrients that didn’t go back to their original source so applying it to a piece of land it can make it look regenerative but in fact it is not.

That episode required a lot of research and reading. Even so, I felt there were so many rabbit holes that I could have gone down to learn more. To keep things a little lighter, I finished the season last month by going back to my garden and sharing a more personal story.

I’m giving up on drip irrigation¹⁰ after trying to make it work for more than a decade. I originally did it because it should be cost effective but the investment I need to put into it to make it work is just not worth it now. I also don’t have enough storage to collect all of the rainwater in rain

barrels. Instead, I want to focus on capturing more of it in the soil, so I don't need to capture it all and then re-distribute it. The more passive the process the less work it is for me.

[Transition Music]

I hope you've got a lot from this season. I sure enjoyed making it.

And here's where you come in. I'd like to find out more about you and what you are looking for. I want to make Season 3 even better. Do you want more of the technical episodes? More stories of me and my garden? Perhaps starting to hear more voices? Maybe you'd like to be on to tell your story.

I know I have listeners from many places around the world. I use Anchor to distribute to the major podcast apps and it tells me that only a third of my listeners are from my country – Canada. Half are from the United States and most of the rest are from the United Kingdom, Europe, and Australia. Africa, Asia and the Middle East make up the rest. The only large area that I don't seem to have listeners from is South America. I wonder why that is? If you have some friends there, please share with them so I can say I have a worldwide audience!

There are two ways you can let give me feedback: Both ways will give you an entry into a giveaway for a hat and a coffee mug. I'll ship them anywhere in the world so don't be afraid to enter! The coffee mug is very special because it's made locally using equipment that is over a hundred years old and with locally mined clay. It should last you a long time. But when its time is up, it'll become soil again. I love it.

For those that like to fill out surveys and want to keep your answers fully anonymous you can use the survey I've created.¹¹ You can still add your name and contact at the end if you want to be in the draw. The other way is just to send me a direct message with whatever feedback you have. My email is scott@plantsdigsoil.com and I can be found on Twitter and LinkedIn by searching with scottgillespie as the username. There will be links to my email and social media in the show notes so don't worry about trying to copy those down. I'll do the draw in new year so be sure to get the feedback to me by January 15, 2021 in order be entered.

Have a great holiday season and be sure to take some time to rest. Season three will start in February of 2021. I'll talk to you then.

[Transition Music]

Remember to get local advice before acting upon this information. If you don't know who to talk to, get a hold of me and I'll help you find someone. If you're in my local area and are in need of help, contact me. It's always free to chat. If we get to the point that the scope broadens to consulting work, we can work out a plan that fits your budget.

Would you like to keep up with me through a free monthly newsletter? Go to www.plantsdigsoil.com/contact and select the newsletter option. If you haven't subscribed to the podcast yet please make sure you do that in your favourite app. If you're a long-time listener – will you consider leaving me a review? This helps others discover the podcast. If you know of

someone that would enjoy this, please be sure to share it with them directly or through your social networks.

If you're still listening, you're probably like me and like to know what the catch is. Why am I putting out this information for free? The reason is that I love to learn, and I love to share the information. My knowledge has been built up from experiences in my own garden, advising farmers and agronomists in my consulting business, and from reading the latest books and articles on agronomy and regenerative agriculture.

I have a B.Sc. (Agr.) with an agronomy focus and a M.Sc. with a focus on Plant Science. Beyond my formal education, I have attained, and maintained, my Certified Crop Advisor designation and am a member in good standing with the Alberta Institute of Agrologists.

Nearly everything I talk about is from free resources posted to university and research organization websites. Books that used to be hard to track down are available to buy or borrow for nearly anyone with an e-reader. The information is out there – sifting through it all is what takes the time.

I make my living entirely from consulting. I don't sell any products, software, or systems. I strive to be as independent and as unbiased as possible so I can provide the best advice to my clients and help as many people as possible move from conventional to regenerative agriculture.

[Transition Music]

¹ <https://www.plantsdigsoil.com/podcast/007-plants-as-soil-amendments>

² <https://www.plantsdigsoil.com/podcast/008-no-stats-no-effect>

³ <https://www.plantsdigsoil.com/podcast/009-beyond-cover-crops>

⁴ <https://www.plantsdigsoil.com/podcast/010-plant-green-plant-brown>

⁵ <https://www.plantsdigsoil.com/podcast/011-trouble-with-bylaw>

⁶ <https://www.plantsdigsoil.com/podcast/012-simplicity-in-cover-crop-mixes>

⁷ <https://youtu.be/nxFQMf7uXHM>

⁸ https://www.youtube.com/playlist?list=PLloOFtWdjZVccySW3iAmDE7sgg_mTdtKV

⁹ <https://www.plantsdigsoil.com/podcast/013-caution-on-carbon-payments>

¹⁰ <https://www.plantsdigsoil.com/podcast/014-giving-up-on-drip>

¹¹ <https://www.plantsdigsoil.com/podcast-feedback-fall-2020>