

Transcript of Episode 016 of the Plants Dig Soil podcast – “What is Regenerative Agriculture?”

Hello! This is Scott Gillespie and welcome to the third season of Plants Dig Soil. In this podcast, you will learn how to think critically about regenerative practices as you work to incorporate them into your agricultural, horticultural, and home gardening systems.

[Transition Music]

In this first episode of the season, I will attempt to answer the question: What is regenerative agriculture? To do that, I will tell a story about discovering footwear outside of the mainstream to help alleviate my back pain. Bear with me, it will all come together at the end.

Back in the early 2010's, I was getting fed up with back pain and decided that it was time to try orthotics. I had resisted for a while because I had seen how they looked and could not understand how they would work. For those that have not seen them, they are custom-made inserts to be put into your footwear; they are supposed to help with the way that your feet are aligned. Once your feet have become aligned, then your legs and your hips should be aligned. As such your posture will improve, and you should then have little or no back pain.

Up until this point, I had relied on getting good quality boots and insoles that I molded by first warming them up, and then standing in them, so they fit perfectly to my feet. I found regular insoles did not work well for me, or at least they worked for only half of me.

When I was born my left was clubfoot – that is, turned inwards. I was told that I had a cast on it almost immediately after I was born to try to form it back into shape. When I am barefoot you likely would not notice it, but it does have a slight inward curl to it. It is slightly smaller than my right foot and I only have about two-thirds of the motion up and down when flexing it. As a kid, I could never skate properly because it does not allow me to push off from my left foot. The best I could do was to keep my left foot straight and push off from my right. In most everyday activities, though, it has never been an issue.

The biggest impact was made in buying footwear. I always tried on the right boot first and tried to find one that was comfortable with the least amount of extra room as possible. The left foot then had to adapt to a large boot. Once the boots were broken in, I hardly ever noticed it. The only time it was noticeable was when I flexed my big toe and could see the left one back further.

Given that I have two very different feet it makes sense to get custom insoles. If they had large differences, then custom boots could be beneficial. However, that gets expensive and the options are limited. I think because my left foot has a slight curl inwards it fits snugly into the boot and does not move around a lot, so the size difference does not matter much.

I went to an orthopedic doctor, got the insoles, and gave them a good trial. I had them for two or three years and had two different versions of them. After the painful adaptation period I became used to them and could see some improvement, but it was not as dramatic as I thought it would be. The diagnosis of the doctor was that he just needed to work on a new design and perhaps that would help. In the end, I decided not to go with them again. I swung even further back: Instead of getting molded insoles, I just put the ones that came with boots back in.

So why did I do this? This was about five years and I am unable to recall everything that was going on with me at the time, but I do know it was a time in my journey when I was pivoting towards

regenerative agriculture. I was noticing how some farmers were returning to a biologically-based system and trying to rely less on the next great technology. Many farmers were seeing that they were having to put more and more inputs into the system – fertilizer, pesticides, and genetically modified seeds – and did not seem to be getting any further ahead. My feet were feeling more and more coddled. The solution always seemed to be a better design to try to fix them.

Swinging back to just the generic boot insoles did give me some positive change. It took adaptation but I found my feet were doing just fine with the insoles. At about this time – I am unable to recall if it was before or after I made the change – I came across an article where an investigative team sent people to different podiatrists and came back with completely different insoles from each doctor. I had thought there was more of a scientific method to this, but it seemed it was more up to each doctor's discretion¹.

I had been a little skeptical when I went to the doctor that I dealt with and found that he not only did the diagnosis but also sold the product to fix the problem. It is not any different than an eye doctor also having a eyeglasses store, but I could not shake the feeling that there was a conflict there. In the agricultural industry, the same type of conflict exists – most farmers prefer the free advice from their local input supplier. It is the farmers that stepped outside of the free advice paradigm that were able to see how they were getting stuck on the technology treadmill.

[Transition Music]

Where the really big change began to happen was two years ago. I had been watching a series on Netflix called the Art of Design². There was one episode on Tinker Hatfield and how he had transformed sports by designing shoes that cushioned and supported the athlete's foot and allowed them to do things they had not been able to before.

Most episodes of the series were less focused on commercial success and more on the thought process, so I had not paid much attention to this one. It had just been filed away in my unconscious memory until I saw Erik at the blog Root Simple post a story about a Nike shoe fail³. A top basketball player had suffered an injury in a university game because his shoe blew out in-game. This story caused me to think about my own experiences with orthotics and how it seemed that the solution to problems would be in better design.

Erik had previously talked about healing his planter fasciitis⁴ by going to barefoot shoes. Planter fasciitis is condition where you experience intense pain when trying to walk due to the band of muscle from your heal to your toes – the plantar fascia – getting very tight.

Instead of designing more, he returned to a much less designed state. It seemed that the original design caused a problem which then required a new solution, which then needed something else tweaked. It was the same technology treadmill that farmers were jumping off as well.

It made me think: What if there was something to barefoot shoe movement? I had been working on a reno in my basement at the time and had not been wearing shoes for most of it. I only put them on when I was working with heavier items or using some of the power tools. I noticed that my feet were doing just fine without shoes.

Erik had a couple companies that he recommended. There were no affiliate links. He was not making any money from the recommendations. They were simply the two companies with which he and his wife

had found success. I started with Vivo and found they just did not work for me. I do not think there was anything wrong with them, they just did not work for my feet. I had ordered them online as there were no local dealers, but they had a great return policy and sent them back. I tried the other kind recommend by Erik – Lems – and I knew these were the ones.

It was not an easy adaptation, and, looking back, I really feel like it took a full year for the transition. Something really fascinating happened, though it was frustrating and painful at the time. After three to four months, I noticed that the boots were fitting tightly. Well, the right foot was fitting tightly. The left foot was totally fine and perhaps the happiest it had ever been to have a boot that fit it perfectly. They were leather boots. I thought that they had shrunk from the constant wetting and drying that happens with field work. In time, I realized they had not shrunk. Instead, my feet had expanded.

How I discovered this was that I was measuring my feet for a new pair. The company had announced that they had a new design that was waterproof (water resistant was more like it but that is beside the point). I had always got a size 11 or maybe 11.5 boot to fit my right foot and had figured my left foot was 10.5 or so. When I measured my right foot, it was size 12 and my left foot was size 11. They were now bigger and a full size apart! I had not gained any weight, if that is what you are thinking. It was simply that the arches had fallen to a more natural state and the muscles had developed the way they would without a coddled foot.

I ordered the new boots with a size larger. Now, after a year with the new, bigger boots, I can say I really see a difference in my feet. I love being barefoot as much as possible. I used to struggle with balance exercises or yoga poses, and now have almost no issue. My feet are much stronger and so are the calves and everything that helps keep me upright and moving.

[Transition Music]

I saw how much my feet had changed when I tried on my once comfortable winter boots. The first thing I noticed was how the sole pushed up against my arches. It was painful to walk in them. My arches were not meant to be supported. They were meant to support my weight and work hard to balance me and move my feet for grip. I also noticed how my feet felt like they were in a block of wood. My barefoot style boots allowed them to move and flex the way they were meant to. These winter boots held them rigid.

The boots I had for summer would work for winter, but they would not be ideal. As I mentioned earlier, they were water resistant, not waterproof. We go through many thaw cycles due to the warm, dry, Chinook winds that come over the Rocky Mountains. This only makes a good pair of boots even more important – it gets very slushy and muddy when this happens.

They also were only just above ankle height. I would need boots that could handle the deep cold and deep snow that my area brings. I live just north of the Montana border in Alberta, Canada. I have seen lows near -35C and have experienced weeks where the high hardly went above -20C. Snow will commonly be 30-60cm deep.

I searched the barefoot shoe sites and came up with nothing. Most of them are based in temperate climates where the winters are mild. It appeared they had not thought of a winter boot. Maybe they figured there was not a market for it, or perhaps ideologically it did not fit their view. Most were minimalist to the core so the idea of a thick, insulated boot with a thick sole was likely

incomprehensible. I think it was a stretch for them to come up with the hiking boot that I use for my summer field season. Even that probably seemed to stray from the ideal.

But then it hit me that people have lived in this area for thousands of years, and they seemed to manage just fine. I am from the dominant culture of Canada, the colonizers. I am a straight white male with ancestors that immigrated from Britain and Europe. The narrative that I grew up with is that this area has only been settled for a little over 150 years. The reality is that humans have lived here for millennia.

I was at my computer when I came to this realization and so I searched out mukluks – the winter footwear common to Indigenous peoples all over this land. What I found was Manitobah Mukluks - an Indigenous owned and controlled company in a neighbouring province that had exactly what I was looking for. I was pleased to find mukluks that used modern materials and manufacturing processes but were based on the original construction methods of the traditionally made ones.

It was possible to buy the handmade ones, but they were scarce and required a special order. They were expensive too – but this was because they were employing people that were reviving their traditions and they were paying them fairly for their work. As a non-Indigenous person, I would not feel comfortable wearing traditionally ornamented boots. To me it feels like cultural appropriation.

The modern designs were not cheap either, but I saw them as an investment. I expect the pair I have should last for decades. As it turned out, I received them just in time. Only days after their arrival a late September storm came that dumped 60cm of snow over a 48hr period. They worked perfectly keeping the snow away from my feet and keeping my feet warm and toasty while I spent hours digging out sidewalks and driveways.

[Transition Music]

Have you figured out how my footwear journey relates to regenerative agriculture? I will finish off this episode with some concluding remarks as a way to summarize how I see things.

The main way I see them relating is in looking to the ways of the people before us rather than new technology. My feet were getting more and more solutions designed to try to fix them. The problem was that the need for new technology was related to fixing a problem created by the last solution. I got fed up with the orthotics and just let my feet do what they wanted. It was not a quick fix, but it worked.

In the story of the athletic shoes, the designs with new materials and new manufacturing techniques allowed athletes to get an edge. The unintended consequence was that it put strains on other parts of the body and when these weaknesses came through the solution was not to fix the poor design, but to support the weakness created by the poor design.

The barefoot shoe movement and the pioneers of regenerative agriculture started with people getting to a point of frustration and choosing to go back to the drawing board. Instead of trying to fix a broken system with more technology, they reset the system, and watched what nature would do.

This does not mean everyone who observes and arrives at a conclusion is right. In both movements there are people with ideologies that are hard to substantiate. Many times something appears to work initially, only to be proven wrong later. The problem is that hubris can creep in and cause certain people, and those that follow them, to believe so whole heartedly in the system that they are unable to see anything working any other way.

Chris Newman, a former engineer turned farmer, and a member of the Choptico Band of Piscataway Indians in the District of Columbia, United States has a name for this: this environmental racism. He defines it as the “...phenomenon wherein indigenous people spend centuries advocating for something and being utterly ignored until someone White comes in with the exact same message and ends up being lauded as an innovator and a hero.”⁵

Spend some time on the barefoot shoe websites and look up videos on YouTube to explain the movement. You will most often find white people explaining it as if they were the first ones to put all the pieces together. If you have been trying to make sense of the regenerative agriculture for long, you will likely have already encountered this. I call them the celebrity farmers, consultants, and researchers.

Up until Covid hit a year ago, they were the mainstay of the speaker circuit. I had many farmers pull me aside at conferences and say things like “Yes, that may work for him, but it won’t apply to me here” or “Yes, he can do all those things on his farm but I’ll bet if he didn’t have all the speaking fees the farm wouldn’t be profitable” or perhaps most importantly “Yes, his farm is profitable but I don’t have a direct-to-consumer market near me to sell at a higher than commodity price”. Did you notice that I did not use they/them to indicate male/female or other genders? Can you think of a regenerative celebrity speaker that is not male? Or is not white?

If you want to learn more about Chris Newman, I suggest starting with the Positively Green Podcast Episode 32 titled “Where regenerative agriculture gets it wrong and what we can do about it with Chris Newman of Sylvania Farms”.⁶ For those that like to read check out the article in which he defines environmental racism titled “Grass-Fed Beef Won’t Die For Our Sins”⁷ and “Small Family Farms Aren’t the Answer”⁸

[Transition Music]

Remember to get local advice before acting upon this information. If you do not know who to talk to, get a hold of me and I’ll help you find someone. If you are in my local area and need help, contact me. It is 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 have not subscribed to the podcast yet please make sure you do that in your favourite app. If you are 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 are still listening, you are 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 clients 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 ereader. The information is out there – sifting through it all is what takes the time.

I make my living entirely from consulting. I do not 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.

¹ I can't find the original article and unfortunately didn't save it anywhere.

² Netflix. 2017. Season 1 Episode 2. Tinker Hatfield: Footwear Design. <https://www.netflix.com/ca/title/80057883>

³ Root Simple. 2019. Shoe Fail! <https://www.rootsimple.com/2019/02/shoe-fail/>

⁴ Root Simple. 2016. A Cure for Plantar Faciitis? <https://www.rootsimple.com/2016/09/a-cure-for-plantar-faciitis/>

⁵ Chris Newman. 2019. Grass-Fed Beef Won't Die For Our Sins.

<https://medium.com/sylvanaquafarms/grass-fed-cows-wont-die-for-our-sins-de3ad922c56f>

⁶ The Positively Green Podcast. 2020.

Episode 32 - Where regenerative agriculture gets it wrong and what we can do about it with Chris Newman of Sylvanaqua Farms.

<https://www.greenwillowhomestead.com/blog/episode-32-where-regenerative-agriculture-gets-it-wrong-and-what-we-can-do-about-it-with-chris-newman-of-sylvanaqua-farms>

⁷ Chris Newman. 2019. Grass-Fed Beef Won't Die for Our Sins.

<https://medium.com/sylvanaquafarms/grass-fed-cows-wont-die-for-our-sins-de3ad922c56f>

⁸ Chris Newman. 2019. Small Family Farms Aren't the Answer.

<https://heated.medium.com/small-family-farms-arent-the-answer-742b6684857e>