504 Insurance and Organic Matter (Regen Ag News Jan 2023) – Plants Dig Soil Consulting Ltd.

#RealisticRegenAg | Could the level of organic matter in your soil be tied to your insurance premiums in the future? This is just one of the many articles that I came across this month as I was looking for regenerative agriculture news. Stay tuned for this and many more.

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https://mailchi.mp/plantsdigsoil/newsletter

My service offerings:
https://www.plantsdigsoil.com/pricing/

Email: scott@plantsdigsoil.com
Twitter (Scott): https://twitter.com/scottcgillespie
Twitter (Company): https://twitter.com/PlantsDigSoil
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References in podcast:
https://www.realagriculture.com/2023/01/knowledge-is-power-combing-the-data-to-support-building-organic-matter/
https://mitchrubin.substack.com/p/raising-the-flag-on-soil-carbon-credits
https://podcasts.apple.com/ca/podcast/future-of-agriculture/id1137767458?i=1000595163880
https://www.producer.com/news/measuring-soils-lost-carbon/
https://www.realagriculture.com/2023/01/how-to-measure-soil-health/
https://www.albertawheatbarley.com/plot2farm/protocols?year=2022&setcommission=alberta-wheat
https://www.gardenmyths.com/mycorrhizal-inoculant-products/
https://www.quantamagazine.org/holly-moeller-finds-keys-to-ecology-in-cells-that-steal-20221219/

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https://www.producer.com/livestock/biochar-helps-cut-manure-emissions/
https://www.producer.com/crops/enhanced-fertilizer-can-cut-emissions/
https://grainswest.com/2023/01/living-proof/
https://praisetheruminant.com/foragesgrasslandsruminants/regenerative-grazing-series-introduction

Transcript (auto-generated by https://otter.ai)
https://www.plantsdigsoil.com/podcast/504-insurance-organic-matter

Could the level of organic matter in your soil be tied to your insurance premiums in the future? This is just one of the many articles that I came across this month as I was looking for regenerative agriculture news. Stay tuned for this and many more.

Hi, my name is Scott Gillespie of Plants Dig Soil, the name of the podcast and the consulting company. We're an independent agronomy company. We do not sell products. We provide advice only. We focus

on #RealisticRegenAg which has to be proven and profitable. We work in person or remote or a combination of the two. Our pricing is set to be affordable to anyone from a Q&A package to full farm planning. There's no long term commitments, you can retain our services, do it yourself or hire others. Of course we always love to work with people over the long term.

This article off of realagriculture.com called Knowledge is Power, Combining the Data to Support and Building Organic Matter. A fascinating thing was discovered when they looked at, okay, so they are the insurance provider for Alberta for crop insurance, and when they went through their data and looked at claims and the likelihood of a claim the people that had less claims that people had more claims.

They looked at many different things. Many different factors are things they had in their database and organic matter was the driver was very highly correlated to who had more claims. And who had less. Now this is going to be controversial and they said that there's no plans to change things now. But they're just putting it out there for discussion.

So obviously, the people that have been building organic matter are going to be in favor of this because it should mean lower premiums. The ones who haven't probably are not going to be in favor of this. And one point to clarify is that it's not looking at absolute values. It is looking at regional values. So it is adapted to your particular area. So black soil zone where organic matter levels are high naturally is not going to be automatically better for them compared to round soils where they are lower.

It's just a discussion but out there and I did see something very similar to this in the United States showing up recent recently as well. So something to keep on our radar that we could start seeing the health of the soil be tied to insurance, which may be an easier way of doing things than trying to pay carbon credits or trying to build up all kinds of other markets. And the interesting thing is, is that they can use our existing test to do this. They're not using a special test. They're using historical data of the standard test that we use for organic matter to come up with this. So very interesting.

Now on this topic of soil carbon credits, there was a very interesting newsletter by Mitch Rubin newsletter article. He does it through substack called Raising the Flag on Soil Carbon Credits. Now I originally found out about this to UpstreamAg from Shane Thomas, January 15 2023 edition and so it's a fairly in depth article I just want to highlight basically his his main point is that he he's in favor of ecosystem services or paying farmers but there are just too many issues with soil carbon credits today to be something that we should be pursuing.

And he brings up a good point that I have talked about before is that soil carbon is just one thing and we're laser focused on programs or programs where we can pay for one thing we're trying to make currency out of carbon and carbon is an extremely complex molecule. Well, carbon, carbon is a molecule but what it makes is an entire discipline of science called Organic Chemistry. It's very complicated to figure out and so he's looking at it as being a more holistic look at things.

Okay, one more article about carbon credits. Now, this is a podcast and unfortunately, the link seems to only work for Apple podcasts but I'm sure if you search future of agriculture episode 346 Comparing 13 different carbon programs with Dr. Alejandro Plastina you should be able to find it now in this he obviously compared 13 different carbon payment plans and there was a huge variation in it. He gave an example where in one program a particular practice would get your credits and in another program that same practice, same farm same location, same everything didn't qualify. So it shows there is still a lot to

be done on this and that may be the maybe the market isn't the best way to tackle this problem. This particular problem. It was interesting.

At the very end of the podcast episode, the host was a little taken aback by just how far away we are on this yet. So anyways, very interesting podcast to listen to. If you want to know more about carbon programs and there is a document it's more us it is all US based. There is a document if you really want to get into the details of it but listen to the podcast and you'll know what's going on.

Now an article from the Western producer about measuring soils carbon. Its long term soil scientist who has put together the data or has been talking about it a lot. It's a very good article if you want to learn a little bit about the science of carbon measurements. And this is one of the big problems with carbon measurement. If you don't know the depths, and you don't know the soil mass, which is the bulk density, it really doesn't mean anything in in a different presentation.

But I heard this person talk Ben Ellert. He, he made the analogy of measuring soil carbon is like taking a cat from a ship and throwing it off overboard and trying to determine the weight of the cat by the how much the displacement of the ship changes. So very interesting if you want to get into this. However, we are getting closer on now and how to measure the health of the soil.

There's an article on real agriculture.com with how to measure soil health. It's very it's well worth listening to the entire interview but the main part of it is that we are getting a lot closer the soil health institute has come up with these measures and they've taken it down into three different things and what they came up with was organic carbon, carbon mineralization potential and aggregate stability. So when you put all of these together, they fit to their criteria of low cost. Easy to do scalable and something that most labs can pivot into. Because he gives the example of bulk density which is a good which is a critical thing for measuring carbon in the soil or for carbon programs, but it's a very difficult thing to do and time consuming. So again, a very interesting article about how we're getting closer on soil health tests.

Let's switch to a little bit of agronomy stuff and which is a little more practical. This is field scale results. To Alberta wheat and barley Commission. They did these field scale trials with farmers looking at things like the nitrogen fixing bacteria that we are starting to see come out the products that are showing up. There was some trials on split nitrogen different seeding rates, nitrogen rates.

The interesting thing is like what I have found in a lot of things a lot of these practices don't actually make much of a difference. For some reason or I guess just basically agronomy if we follow the basics of getting our nutrients in place, seeding it at an appropriate rate. The plants do their job. And I think it's also to because of our such short growing season and I know people always say we have such a short growing season we can't do much but compared to a lot of areas we don't have like months and months of slow growth or different things happening. The crops canopy over say in June and by, say by mid June or something that canopied over and by late July, they're starting to mature and by early August they're starting to really start showing their maturity. So we have one shot and so this is the problem and there's a lot of these things.

People want to try and are spinning them as regenerative. But we have to we have to follow the data. So very interesting to cycle through these on farm replicated statistically valid trials. And really get an idea of how things actually do work.

Related to this mycorrhizal inoculant products this is a garden blogger but he has very similar filters that I have on these things. He has seen these things from an urban gardens. I've seen the show up and garden centers and they I think the we're not seeing them too much in agriculture yet because they're cost prohibitive. And it's a really interesting way he had put this thing out so it's an interesting fallacy of logic. As he says there's clear evidence that mycorrhizal fungi in the soil provide benefits and that's, that's no doubt that's true. mycorrhizal fungi are very important for plant connections. So then companies say, Well, if they're important, then you should be adding them to the soil and buy our product. But the soil is full of these already and a very small addition to it is going to be quickly consumed or taken over or as he said, sometimes we don't have verification of what it is products are dead or alive or they do anything.

The only time I see a lot of these things work is where they have to be very, very close to living route and have a specific purpose. But as he said, he did some investigations and he could not find any evidence, like actual scientific third party trials that would prove the results of these and of course on the sites they had, what I see a lot of very terrible. Alright, well, of course, they're great pictures that show their product working but just terrible science. So again, if you want to look through it, check it out. It's very interesting.

I'm gonna finish this episode with a very interesting story that's not directly related to regenerative agriculture, but it's just fascinating ecology. There is an article from quantum magazine called Holly Moeller finds keys to ecology and cells that steal. So what's fascinating is that she has discovered or studied organisms, microscopic organisms that will ingest rate which is normally not for a long time. But instead of just digesting the parts that are useful to them.

So in this study, she found things that take in things that could photosynthesize, steal the chloroplasts and start using them themselves. It's just a really interesting article. Things that we were I guess, sometimes in pure science or pure academia we, we don't see a lot practical stuff. This may not come to be practical for us for a while. But it is fascinating, just getting familiar with what is actually going on out there. So and what is was being discovered with the things that we just we still don't know. So anyways, I'm going to end there. I will put the links to all of these articles in the description. And I will put in some extra ones that I didn't get to some honorable mentions, but just didn't have a chance to highlight in this episode. So thank you for listening. And I will talk to you next time.