

## 531 Transformational Agronomy

#RealisticRegenAg | Is the slow grind of progress better than the grand schemes we see postulated now? A new article says yes. They advocate for starting at the end goal and working towards what is needed most. I'll be covering this and seven other articles that I came across this month in this episode. Stay tuned.

Welcome to Plants Dig Soil, a podcast about #RealisticRegenAg. I'm your host, Scott Gillespie, and I'm an agronomist from the western Canadian prairies specializing in climate-smart agriculture. I discuss scientifically proven practices that benefit the planet and, just as importantly, farmers' economic sustainability. Be sure to visit my website, [www.plantsdigsoil.com](http://www.plantsdigsoil.com), for resources and information about the services I offer.

News article links:

<https://csanr.wsu.edu/agronomic-engineering-and-incremental-transformation/>

<https://www.producer.com/news/farmers-call-fuzzy-sustainability-definition-a-barrier-to-emissions-progress/>

<https://spudsmart.com/keeping-spuds-healthy-with-a-wide-rotation/>

<https://www.producer.com/news/grasslands-seen-as-answer/>

<https://www.ruralrootscanada.com/good-habitat/>

<https://www.topcropmanager.com/with-a-little-help-from-our-friends/>

<https://decode6.org/articles/can-remote-sensors-measure-soil-carbon/>

<https://organicalberta.org/article/law-to-boost-soil-health-back-on-eu-agenda/>

Transcript is available:

<https://www.plantsdigsoil.com/podcast/transformational-agronomy>

My course: Profitable From the Start: Cover Crops for the Prairies:

<https://plantsdigsoil.thinkific.com/courses/cover-crops-prairies>

My funding service offerings:

<https://www.plantsdigsoil.com/pricing/#paperwork>

SCAP overview: <https://youtu.be/OicitHJR2Ik>

SCAP program details <https://www.alberta.ca/sustainable-cap.aspx>

My consulting packages:

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Email: [scott@plantsdigsoil.com](mailto:scott@plantsdigsoil.com)

X (aka Twitter) (Scott): <https://twitter.com/scottcgillespie>

X (aka Twitter) (Company): <https://twitter.com/PlantsDigSoil>

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The first article I have for you is about transformational agronomy, written by a long-time source for many of my agronomy insights, Dr. Andrew McGuire from Washington State University's Center for Sustainable Agriculture and Natural Resources. His article is a review of a much more in-depth journal article, which I intend to read, but I want to highlight this because it seems to put into words what I've been thinking about for a while.

The opening paragraph states:

In a realistic scenario, where not everyone gives up eating meat, where some in the developing world eat more like us, and where food waste is not zero, feeding 9+ billion people will require a lot more food. Ideally, this additional production would come from existing cropland, with better input efficiency and fewer off-farm effects. How are we going to do this, both in currently high-yield agriculture and where significant yield gaps exist? This is the topic of an important book chapter from Hunt, Kirkegaard, Celestina, and Porker (2019): Transformational agronomy: Restoring the role of agronomy in modern agricultural research.

We have gotten caught up in regenerative agriculture. I believe we are at or about to reach peak hype. 2024 might be the year the bubble deflates, just a little bit. I have been advocating for #RealisticRegenAg and even started using the hashtag on social media for it. Regenerative agriculture celebrity farmers talk about grand schemes. What I believe will make the change are the grind schemes. As Andrew says in the article, "low profile, incremental, "magnificently mundane" tasks, achieved by many interacting parts." Please check it out. It's worth the read. And I'm sure the journal article will be as well when I have a chance to read it.

Now, let's move on to the next article that relates to this fully. "Farmers call a fuzzy sustainability definition a barrier to emissions progress" from the Western Producer. Farmers know there could be better ways of doing things, but oftentimes the programs don't accomplish what they want. Sure, it's great to lower emissions or build carbon in the soil. But if

what you want to do doesn't fit the criteria, and there is no price premium, how can you justify doing it? A podcast I listened to a while back had work that showed that change happens when there are government extension programs, private industry to support farmers, and willing farmers to try new things. What we are missing in Canada is government support. Right now, they just want to reach climate goals. If they worked with industry and farmers to find out what we all want, we could do a lot better in reaching everyone's goals. It's a great read, so check it out.

Now for a few quick hitters.

First up, an article by a potato grower in my area that is focusing on a healthy potato field with fundamental agronomy. It's in Spud Smart and is written by the farmer, Rob Van Roessel, and the title is "Keeping Spuds Healthy with a Wide Rotation." He's working on long crop rotations to help slow or stop diseases from ever getting a foothold. This is what the grind looks like instead of the grand. Slow, incremental progress to reach a goal.

Next, an article on grasslands called "Grasslands seen as the answer" from the Western Producer. A scientist from Agriculture Canada says that our greatest source of increased carbon emissions in the past 30 years has been from grassland conversion to cropland. Had those areas been protected, we'd have a lot less work to do now to get the carbon back in or find places it can go. As there is more and more recognition of the value of natural spaces, hopefully, we can slow or stop the changeover.

Related to this is an article about the value of fencelines called "Good Fences Make for Good Habitat" from Rural Roots Canada. Leaving small areas as buffers between roads and fields helps absorb excess nutrients or pesticides and, if those runoffs aren't too strong, can support the pollinators and beneficials needed for your land.

Next, I'd like to highlight an article about mycorrhizal fungi called "With a little help from our friends" on Top Crop Manager. The researchers highlight all the great benefits from having these fungi working with the crops. But they caution that just because they are good, it's not universal. Their trials on a commercial inoculant found less yield when it was used. Be cautious about what you try and always leave check strips.

And finally, in the quick hitter section, I want to highlight a carbon measurement article called "Can remote sensors measure soil carbon?" from the American Society of Agronomy. I believe the carbon hype is deflating, but there are always companies saying they have a way to measure it. The short answer is no; it's not possible with anything that doesn't take the soil and measure it. Remote sensing can only see the surface and needs extensive calibration. We're not there yet.

I want to finish the episode with a very short article but one of great significance. It was posted to the Organic Alberta website and is titled “Law to boost soil health back on EU agenda.” Farmers have been getting pressured to change practices a lot more in the European Union than here in Canada. I don’t expect they will see it too kindly to this proposal. The interesting thing is that a large coalition of companies that include Unilever, Nestlé, and Danone think it’s not going far enough.

While I agree that soil health should be prioritized, I worry that the measure used won’t mean anything on the farm level. When large organizations or governments look to make changes, they look to metrics. These are things that can be easily measured and indicate whether you are going towards or away from a goal. Focusing on metrics is fine if you’re measuring the right thing. However, if you are not, you could look good on paper but poor in reality.

We’ll have to keep an eye on this and see where it goes. Thanks for listening to this month's regenerative agriculture news, and I will talk to you next week.