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Short webinars for environmental policy-makers and practitioners

Regenerative Agriculture in New Zealand

The following questions were asked during our live webinar with Gwen Grelet and Sam Lang but due to time restrictions, we were unable to answer these in the session.

Can you talk about any reg ag practices for commercial vegetable growing? This is usually quite intensive and relies on a lot of tillage, pesticides, synthetic N, etc.

We did not provide example for commercial vegetable production because at the moment we lack resources to include vegetable production in our think piece (work in progress for securing additional in-kind or cash to remediate this). However, there are leading regenerative innovators for profitable commercial vegetable production (see: <http://www.roebuckfarm.com> - very profitable but not large scale). Quorum Sense has a couple of larger scale vegetable producers involved but mostly early days. We have begun communicating with hortNZ and vegNZ to discuss regen ag in this sector.

Minister O'Connor in a webinar yesterday said Regen Ag was a "brand" that has been imported into NZ and products in US attract a premium. Do products from "regen ag" farms in NZ attract a similar premium?

There are producers and growers already securing premiums using their relationship with brands and marketers. Each of these producers and growers have tailored their strategies to the particularities of their business. There are also currently 2 generic pathways for accessing premium price using "regenerative" - Land-to-Market (LTM, Alan Savory, based on the Ecological Outcome Validation (EOV) framework) and Regenerative Organic (RO, Rodale institute). Our former MWLR colleagues Cerasela Stancu is doing some work in NZ exploring options for RO premium in NZ. We are currently exploring options for collaborating with the EOV team and LTM. We know influential NZ industry bodies are also looking at these. Both pathways originate from the US. In our opinions both pathways would need to be suitably adapted to NZ before we can make an informed decision on how premium and niche markets can be captured by regenerative producers. NB: there are "regenerative wool" already produced in Australia sold on premium price.

A question for Gwen - how long were the farms managed conventionally/regeneratively prior to sampling? Surely this will have a large impact on the results.

This varied: from 3/4 years to 15+ years. Yes, this might have an impact on the results. We did not design the study to capture adequately the effect of "time since transition", although we have captured some of the management history of each paddock/plot which we can use to further interrogate the data.

Does regen ag need its own certifiable marketing scheme?

Please see answer to previous question. There are certifiable marketing schemes already being pushed forward by US-based entities. This is a polarising topic of discussion. Pros: certification would help provide the consumer and anyone invested in landscape health and social / environmental licence to farm with some ways of ensuring the claims associated with "regenerative" are true and outcomes sought after are achieved or at least management is tailored to progress towards those outcomes. Cons: certification schemes have not necessarily led to delivery of sought-after outcome, too much paperwork required, not context-specific, against adaptability. Some regenerative farmers are focused on low cost production in order to increase profit margins, rather than focusing on premiums.

Any research on the economic and social factors that influence farm practices in NZ/ Aotearoa? And how they might then affect further uptake?

There is lots of research in NZ and worldwide on factors that influence adoption of practices / innovations. But no research completed to date on adoption or influences on regenerative practices - some are underway (PhD and Master theses). We have applied for funding to undertake project that touch on this topic but have so far been unsuccessful at securing such funds, on the grounds that first and foremost, the "claims" made by Regen Ag practitioners have to be verified before adoption should be studied.

What is BP on horizontal axis?

Best Practice - apologies for not stating this more clearly

The carbon and nitrogen results are over what time period? Is it possible that these are early stage in the soil transition?

This was a one-off sampling. As pointed out by Christina some of the regenerative farms were not long transitioned to regenerative management. Our study has a number of replicates insufficient to detect changes in soil carbon stocks (it is large stock that changes slowly). So, the trends as observed in on our data are suggesting that with sufficient replication an increase might be detected. However, ideally, if resource and time constraints were removed, to adequately verify the claims made by regen protagonist about soil C stock increase, the ideal experimental design would include a time series (sampling the same farm over a 3-10 year period).

In the Otago study -how long did you employ regen principles for on the regen sites?

See answer above.

Is there a difference between sustainable farming versus regenerative farming?

Yes, sustainability implies the ability to continue an activity in the long term without causing negative impacts. Regenerative approaches seek to go beyond that - such management seek to improve the system on the triple or quadruple bottom line. So not only avoiding negative impacts but promoting positive impacts. However, everyone interprets these terms differently so there can be lots of crossover in understanding.

Was there any consideration given to nutrient content of regen farmed crop versus best practice farmed crop?

We studied the nutrients too on the pastoral farms. the data are hot of the press and have not yet been suitably looked at, so I did not present those. But we have measured many different nutrient pools in both the soil and herbage.

What is the first step from conventional to regenerative? (Are some principles more important than others?)

This is a long conversation that cannot be answered quickly here. It depends on the context and on the main outcomes sought after. There are multiple webinars available online, and supporting farmers in learning more about such topics is one of the goal of Quorum sense:

<https://www.quorumsense.org.nz>

Regenerative agriculture, environmentally sustainable farming practices, good management practices, best management practices.... aren't all these intrinsically the same things?

Please see answers provided above.

Are stocking rates playing a role in regenerative agriculture?

Yes - however some farmers are decreasing stocking rates while others are increasing stocking rates as a result of growing more grass.

Is reg ag more suited to certain soil types than others?

That depends on what you consider regen ag. There are overseas studies indirectly suggesting that different approaches are more suitable for certain contexts. However, the farmers would probably argue there's value in regenerative approaches regardless of soil type if, for example, you are focused on improving the biological function of your soils. We are developing research proposals to answer this exact question.

Were soil carbon stocks expressed as an equivalent soil mass to account for any differences in bulk density between the two treatments?

Yes.

Are you yet able to consider soil carbon in terms of carbon credits?

Not yet - in this study, we did not quantify soil C stocks at farm level (we did not have the resources to do this).

Was there any analysis of cost comparisons between the regenerative and 'best practice' groups of farms in the pilot study in Southland?

Some of the farms are being examined right now exactly for that - but not all of them. We do not yet have the data.

Great work guys - thanks heaps for that! Would be really good if you could do another one of these in November/December to present the results.

That is indeed the plan!