

FDI Feature Interview

18th February 2020

Doug Pow: Practical Regenerative Agriculture

Geoffrey Craggs

Research Analyst, Northern and Rural Australian Development Research Programme

Key Points

- Consumer demand for agricultural produce that have not been exposed to chemical treatments is increasing – cleaner and greener food is the way of the farming future.
- Adopting practical regenerative farming practices can result in savings of time and money, freeing resources for other purposes.
- Pastures that have been managed by incorporating regenerative agricultural systems are able to cope with the stresses that result from weather and a changing climate.
- Harvesting woody waste from forests for application as a mulch on farm crops could be strategy to reduce fuel loads and significantly mitigating the risk of bushfire.

Introduction

In June of last year, FDI took the opportunity to interview Doug Pow, a cattle breeder and avocado farmer from Manjimup in Western Australia's south-west. The interview focused on improvements that dung beetles have made to Doug's farm pastures. Doug further spoke about the first-hand knowledge and experience he has gained by observing and studying the ecological and economic impacts of the native and introduced insects.

This concluding interview identifies and discusses a range of very positive outcomes that Doug has realised by incorporating regenerative agricultural practices throughout his farming operations. Doug also reports on his emerging avocado cropping business and the positive effects that the use of [biochar](#), as a natural soil additive, has had on plant growth and development.

Interview

FDI - [Regenerative agriculture](#) is a growing concept across WA agriculture. The [RegenWA](#) programme, commenced in mid-2018, is aimed at identifying and adopting leading sustainable farming practices, including ways of regenerating soils and landform in the agricultural industry. Have you had any involvement in *RegenWA*?

Doug Pow - I haven't had direct involvement in an official capacity, but I fully understand the processes that they are targeting; it's largely what I'm doing on my farm. I've basically cut out most of the expense in the livestock side of our farming operations and the animals are responding remarkably well, as are the pastures.

I do understand and I think regenerative agriculture should be given the upmost support because we're finding that in the drier parts of Western Australia, the further removed you are from the principles of regenerative agriculture, the more the soils are degrading, probably at an accelerated rate. This is largely being measured by the amount of [soil carbon](#) that is present. I think that once soil carbon levels get below a certain threshold, it may not be a functioning soil and that is a worry.



Figure 1. Avocado orchard. Source: <https://www.agric.wa.gov.au/avocados/avocados-western-australia-%E2%80%93-overview>.

FDI - How do you view regenerative agriculture operating on your farm?

Doug Pow – My view is this. Why spend money to do something you don't need to do? Why dose animals and pastures with poisons to kill parasites whether present or not and applying inorganic fertilisers beyond the capacity of a soil's ability to utilise? These are great tools of modern farming but only when shown to be required by appropriate testing. I think that is a pretty good selling feature to be able to say your produce has had a minimum of chemical inputs, preferably none. As a country, if we can provide cleaner and greener produce to whoever is buying it, whether in the local town, the next city or another country, it has got to be an advantage. To any farmer, not having to purchase something, fertilisers and pesticides for instance, is a tremendous advantage. Not only do you not have to buy it, you don't have to apply it, nor do you require the tools and machinery that would be necessary to apply the product.

In a lot of ways, once you start to pick up a few of the meanings and themes of regenerative agriculture, a compounding process begins. You realise that maybe you don't have to poison that pasture or animal pest. It's a very interesting experiment to simply not do that for a year. If you don't do it for a year, and there is no apparent detrimental change and the animals are just as happy, then you can have a good think about the next 'thing' you can maybe avoid doing.

FDI – From your perspective, how do you see the results of regenerative agriculture in a practical sense?

Doug Pow - As soil becomes more fertile, aerated and friable, it's interesting that pastures seem to better-handle and respond to the stresses of climate and weather. The animals, therefore, handle the yearly stresses better because they have green grass to eat where it may have not been available otherwise. I also think pastures tend to become more perennial which I'm certainly finding on my farm. That is a big advantage. If you have very annual pastures and periods in the year with no pasture crops, then you have to feed the animals, at significant expense and in time and effort. Ironing out of those stresses over the year with more resilient soils, leading to more productive pastures for longer, results in animals that can weather the hot days, the cold nights and the dry periods. If regenerative principals can do all that without needing chemicals, then that's a big saving for the farmer.



Figure 2. Biochar produced for agricultural application. *Source: Biochar Network of WA.*

As well, it constitutes big savings for the consumer eating the product – it's about healthy food. By 'healthy food', it doesn't necessarily have to be rigid like veganism or totally organic. There can be a middle ground where you use a chemical if there is a definite need but, if you don't need it, to me it just seems dumb to use it. Everything we farm, animal or plant evolved under some combination of climate and soil completely without modern poisons.

FDI- How do you see the future? Have you further applied these regenerative principles in your animal husbandry?

Doug Pow - Ours is a mixed farm, like most in this district. I am five years into an experiment applying these basic regenerative principles to producing avocados, a crop I pioneered in this district in 1981. We planted a row of avocado trees into soil in which wood charcoal, [biochar](#), was incorporated together with an annual application of woody forest waste. This was mixed with a little chicken manure, that was applied on the surface. Only low applications of fertiliser have been applied since planting on our farm in order to compensate for elements removed in the fruit. In our two commercial harvests so far, the trees in the soil that has been amended to be more like a natural forest soil, have considerably outperformed the 'control trees' in the next row. I think this shows that a considerable synergy between forestry and agriculture is possible and, that it is quite economic. Other farmers are following my lead.

Mimicking a natural system, as much as is possible, does not need to be difficult and it can certainly be economic. In the light of the recent disastrous fires in our country's forests and to reduce forest floor fuels, maybe we need to transfer or divert the massive amounts of available combustible material into agriculture where it will quickly rebuild our precious soil carbon?

About the Interviewee:

Doug Pow farms in Middlesex, south of Manjimup in Western Australia. Originally from Pemberton, Doug raises beef cattle and is also pioneering avocado growing in the South-West of WA.

Doug is interested in biological farming systems that support ecosystems comprised of plants, animals, bugs, fungi and microbes. Those systems can replace fossil fuels and breaking machinery, which increases productivity and efficiency.

Any opinions or views expressed in this paper are those of the individual interviewee, unless stated to be those of Future Directions International.

Published by Future Directions International Pty Ltd.
Suite 5, 202 Hampden Road, Nedlands WA 6009, Australia.
Tel: +61 8 6389 0211
Email: info@futuresdirections.org.au Web: www.futuresdirections.org.au