Rewilding: life fosters more life

Maddyness is collaborating with environmental publication Ours to Save to bring readers fresh perspectives on sustainability. In this piece, Al Howard discovers a new school of farmers who are regenerating and rewilding land, starting with the soil.

Temps de lecture : minute

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Unless you are a biologist, a farmer or an avid gardener, the topic of soil health may seem uninspiring. With slug pellets and fertilisers available in any nearby garden centre, barren land feels like a problem from a long-lost Biblical past or a George Miller franchise. Yet, advocates of regenerative agriculture have begun to consider farming from the soil up, situating healthy *living* soil at the heart of all life, and providing a compelling solution to the greatest issues faced by our generation: species extinction and climate change.

The theory is, in principle, simple. By disposing of disruptive practices such as tilling (the digging and overturning of soil) and the use of synthetic fertilisers and pesticides, and by introducing a diverse range of cover crops to protect and nourish the soil, farmers are able to grow better quality food. Perhaps the most significant result of this method is that more carbon can be safely stored in topsoil, reducing the rising levels in the atmosphere.

In recent history we have become aware of the critical effect of consumer culture on the planet, but in even more recent history buzzwords such as ‘sustainability’ have taken a hold. They have been overused and subsequently devalued, leading author and farmer Gabe Brown to ask: “Why would we want to sustain a degraded ecosystem?”.

Consequently, the challenge for many modern farmers is not to merely farm ‘sustainably’, but to rehabilitate their ecosystems and by extension, the soil.

Rooted in Allan Savory’s investigation into holistic management in the 1980s, this approach to farming situates man within the ecosystem, rather than above it. Holistic management aims to recognise the interrelation between man, plants, animals and the land; primarily through the water cycle, the mineral cycle (which includes the carbon cycle), energy flow and community dynamics. Over the past five years, Savory’s *Holistic Management* has been developed by Gabe Brown’s book *Dirt to Soil* (2018), David Montgomery’s *Growing a Revolution* (2017) and Graham Harvey’s *Grass Fed Nation* (2017).

At the centre of these studies is a fundamental understanding that life fosters more life; meaning that healthy, living soil provides a natural

foundation for a diverse and wholesome food chain. Larger insects return as natural predators to eliminate smaller pests; herds of frequently moving animals fertilise the soil; and this in turn resurrects formerly degraded land, allowing wildlife to return.

The founding fathers of regenerative agriculture are so optimistic of its potential for stalling and even reversing the effects of climate change, that you have to wonder – why isn't everyone doing it?

According to Jim Lowther, who runs the Lowther Estate in Cumbria, farmers in the UK have been held back by the scarcity of published results by early practitioners (specifically in terms of soil tests). A second and arguably more pressing issue is the economic risk. As discussed by Gabe Brown, who transitioned to regenerative methods on his North Dakota ranch, soil has often grown reliant on synthetic fertilisers and must undergo a process of weaning, which can be unprofitable and time-consuming.

Equally, these new methods are often at odds with those taught by agricultural colleges and practised by past generations of farming families.

Jim explains that putting regenerative agriculture into practice is achievable, even on a smaller scale, adding that struggling farmers often attempt to counter a poor turnover with more livestock.

> *"It's a vicious circle that's difficult to get out of, particularly if there are too many family mouths to feed, all trying to earn a living off a small farm. In short, they are stuck on a destructive treadmill."*

However, with the few who dare to experiment boasting of higher quality harvests and food, more farmers are beginning to convert.

The return of wildlife as a direct result of sustainable farming and conservation has been brought into the limelight by Isabella Tree's *Wilding: The Return of Nature to a British Farm*. The 'Knepp Experiment' saw the return of doves, nightingales, lesser spotted woodpeckers, purple emperor butterflies, and peregrine falcons to a 3,500 acre estate in West-Sussex. This re-emergence is best understood through the model of the 'trophic cascade', whereby the removal of a top predator has a domino effect which reverberates throughout the ecosystem. This theory was demonstrated most strikingly in the reintroduction of wolves at Yellowstone National Park, which restored countless species of flora and fauna, ultimately reshaping the land itself.

Jim has witnessed changes to his estate after only 18 months. "The simple act of getting rid of the sheep flock and lots of the cattle and stopping farming intensively has allowed the wildlife to come back at a

rapid pace”. He adds that the decision to remove their ewes, which was partially driven by economic factors, has also provided ample opportunity to rest the land and enable the growth of trees, shrubs and woodland pasture.

Jim’s aim is to tackle biodiversity loss and carbon emissions, through planting trees on a grand scale and using electric cars alongside regenerative farming of dairy, beef and crops. ‘Biodiversity’, where a greater variety of plant and animal species co-exist, is fundamental to regenerative agriculture, seeking to rebalance ecosystems which have been dominated by monocropping - where one crop is farmed extensively, reducing the quality of the soil. At Lowther they have started intercropping spring barley and white clover, with the aim of adding in spring beans and peas which “fix nitrogen and provide a good source of protein to milking cows”.

From North Dakota hailstorms to tropical rains in Ghana, farmers have had to find ways to adapt to extreme weather. At Lowther, they have responded creatively to Cumbria's past decade of catastrophic flooding.

> *"We've done one pond restoration, one floodplain restoration and one beaver release programme. All of these are designed to slow the flow of water in flood events".*

This scheme has also provided a habitat for waders, water voles, otters and a host of wetland plants. However, Jim has found that it is the beavers who are "a keystone species that help to kick start the processes of landscape renewal."

Jim operates within a private trust which allows for fast and efficient decision making. However, he acknowledges that Lowther's food production programmes would not currently be tenable without government subsidy. He has hopes that the transition to regenerative methods will enable the farmland to sustain itself in the future.

The success of regenerative agriculture lies in the commitment of future generations and long-term plans. In a food market which is dominated by low quality corn-fed meat, from overstretched and undernourished farmland, the time has come to make a change. Whilst the risking of a few years of poor yields will be a bold venture in this fragile economy, the eventual payoff of higher quality food, carbon storage and a lifeline to endangered wildlife is invaluable. At its core, regenerative agriculture is a movement which aims to work alongside nature, rather than against it.

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