A tale of two farms

In June 1999, Alex Podolinsky delivered a lecture to the Demeter International Organisation in Latina, Italy he called "*Bio-Dynamics: Agriculture of the Future*", during which he showed a series of comparative photos depicting soil development on Biodynamic farms, and on their conventional neighbours, taken on the same day. Alex's photos showed humus-rich BD soils after prolonged drought sitting alongside ploughed, eroded, colourless conventionally farmed soil; two neighbouring vineyards after heavy rain – one with rich, crumbly and well drained soil, the other dull and compacted with obvious run-off; two adjoining farms after three months with no rain, one with deep, black BD soil and continuing pasture growth, while its conventional neighbour's soil and plants suffered obvious stress.

Fast forward 23 years and there is still nothing quite as compelling, when comparing the Biodynamic method to other farming systems, as observing the way soil development and soil destruction meet at the boundary fence.

Trevor and Lyn Hatch, together with Trevor's father Ginger, began biodynamic farming on their South Gippsland property in autumn 1969 as a solely cattle operation. For 30 years from 1978 they also grew Demeter certified potatoes.

Trevor and Lyn's son Ben and wife Holly recently purchased the neighbouring property and set about connecting a water system between the two – a two-inch poly pipe laid at a depth of 75cm.

"Using a 90 horsepower 4wd tractor we successfully traversed 150 meters of the home farm with only tearing of the pasture. When we reached the newly created gateway on the boundary fence the tractor lost traction and ground to a halt. The tractor literally stopped right on the line of the fence. We hooked up another tractor via a drag chain to the first tractor and proceeded into the new block. After 30 meters the 16mm bolt holding the bottom of the guide pipe to the bottom of the ripper tine snapped."

The following photos clearly show the difference. A single cut with torn turf in the biodynamic soil compared to large slabs "as big as a kitchen table" torn out of the conventional soil.

Biodynamic paddock

Cleared from bush circa 1958
Beef cattle
One crop of Demeter BD potatoes
Sheep 10 years
52 years since first 500 application

Conventional paddock

Cleared from bush circa 1958
Dairy farm
One cultivation for fodder crop, glyphosate used
Sheep 1 year
Conventional fertiliser (heavy application by previous owner for 15 years, lesser by previous owners)

"Neither paddock has ever been ripped. We have tried ripping and found that it is unsuitable for our soil type, which consists of 17 feet of virtually impervious clay sitting on solid sandstone rock. There was originally a thin wash of loam atop the clay.

"The total lack of fences suitable for sheep and beef cattle on the new block had to take priority over other tasks. Consequently we have not yet been able to apply any BD 500 to the new property. We will start in the coming autumn."

A few hours drive the other side of Melbourne at Vortex Veggies in Inverleigh, Darren Aitken captured this image (right) on a 45-degree day in mid-Jan. His soil was bone dry on the surface – it was just after spring cropping, had been cultivated a month prior and the loose dry soil left to sit bare. In this photo there are 60km northerly winds blowing. But no dust.

Above: *Darren Aitken's property during a 60km northerly*
Below: *the next-door neighbour's property, same day, same time*

Pivoting at right-angles to check his neighbour's place, Darren captured the next image. A dust storm, despite their paddock being under pasture.

These photos back up observations made by Barry Edwards on his Mallee wheat and sheep property – once you get 500 on and some sense of colloidal activity in your soil, it doesn't blow away easily.

From one extreme to the other, the next set of images show Darren's market garden after a recent deluge.

70mm of rain in half an hour looks like this.

Straight after the downpour, the flat top of a garden bed, where all the topsoil had run together.

…But then you look underneath and the structure is still there.

These photos provide more evidence that well structured BD soils – with air and roots and humus – are more resilient and less likely to become waterlogged even after huge rain events. As Alex claimed in his *Agriculture of the Future* lecture, humus can hold water to 70% volume. And once the humus has stored what moisture it needs, the vein system created by the air and roots in the soil carries the excess water away. If you haven't read Alex's translated 1999 lecture, or haven't for a while, it is full of timely observations and insights. And if you have any of your own comparative photos – either of your soils compared to neighbouring conventional soils, or your own soils before and after applying the BD method, we would love to see them via info@demeterbiodynamic.com.au