

THE GOOD DIRT

– NEIL HARRIS

TURNING THE SHIP AROUND

When Neil Harris took over the family farm at Costerfield in 2003 it was run down and the soil lacked fertility. At the time he knew that he needed to get better understanding of how to create a farming system for soil and stock health.

Neil sought advice from agronomist John Pannan, who 'had a unique ability to look at the soil and understand it'. He helped Neil to see that 'farming is like building a house; place your bricks and mortar carefully and you are on your way to creating a structure which will stand solid for many years'.

A visit to Pannan's farm at Horsham was a revelation. 'Walking on his soil was like being on shag-pile carpet, it was so soft,' explained Neil. When he compared it with the dry compacted soils at Costerfield Neil knew that he had to change his operation.

Soil tests revealed pH in CaCl₂ (pH_{Ca}) levels as low as 4.2. Aluminium levels in some areas on the farm were as high as 20% of the cation exchange capacity (CEC) and nutrients were being leached.

Next Pannan visited the Harris property at Costerfield, walked the paddocks and carefully read the soil test results. Then he turned to Neil, 'Do you expect me to perform miracles?' With compacted ground, mineral levels 'out of whack' and poor rain penetration Pannan believed the property was 'a ship sailing the wrong way for over 100 years.' While he saw it as

possible to turn the property around, 'it would be a long journey.' Pannan advised Neil to put in the 'foundation of good soil – lime, gypsum and dolomite'. These, he explained support the building of CEC and in turn, build nutrient retention and availability and soil structure.

Neil's dedication to that journey and to making changes in his soil can most



Neil testing his soil using a penetrometer

easily be seen in the paddocks of lucerne. Initially, when Neil proposed sowing lucerne at Costerfield his father exclaimed 'You'd have to be mad!' With improved soil composition and root penetration Neil was able to grow dry land lucerne crops that

produce three to four cuts for hay or silage a year, as well as grazing Merino sheep. One lucerne paddock has been producing crops for 21 years.

Initially, Pannan labelled Neil Harris a 'more-on' farmer as he applied more and more on his farm in terms of super phosphate and lime. These days, Neil applies 500 – 600 kg of lime per hectare every one to three years. His other inputs are carefully considered following scrutiny of his soil tests. With the good fertility base he has established, Neil is able to use animal manure as his fertiliser and apply trace elements as indicated by the soil test results. In the last eight years the pH_{Ca} has risen to 4.9 and his cation exchange capacity (CEC) from 16% to 44% for calcium, and from 4.5% to 13% for magnesium.

Neil uses an aerator to slice down into the lower levels of the soil. This practice, he says, supports water infiltration; gives more air availability for soil microorganisms and helps roots access nutrients.

Measurement is a key support for good farming and Neil believes that 'you must make sure you have a starting point' to monitor what happening to your soil and pastures. He uses instruments such as a refractometer and a penetrometer to understand how well his soil and his pastures are functioning. Neil knows that these measurements, along with soil tests and observation, have given him the understanding to successfully get his 'ship sailing in the right direction'.

WHAT'S ON

Warrenbayne-Boho Group soil test interpretation

31st May, 9.30-12.30pm

Greg Bekker 5761 1631

Naring Group soil test interpretation

31st May, 2.30-5.30pm

Greg Bekker 5761 1631

Good grazing from the ground up

1st June, 9-3pm

DSE Office Alexandra, Jude Hill 5772 0278

CFI Roadshow

21st June, 10-2.30pm

Carrington Hotel Shepparton,

Chris Burnett 5736 0100

Land class fencing is a demonstration of the efforts of farmers to improve soil health with support from the Goulburn Broken CMA and DPI with funding through the Australian Government's Caring for Our Country Program. For details on the Goulburn Broken CMA Soil Health Action Plan visit

www.gbcma.vic.gov.au.

FURTHER INFO

Rhiannon Apted, GB CMA Yea
5736 0108 or rhiannona@gbcma.vic.gov.au

Greg Bekker, DPI Benalla
5761 1631 or greg.bekker@dpi.vic.gov.au

www.gbcma.vic.gov.au

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