

LOOK AFTER YOUR SOIL

Charles Darwin wrote in 1881 that humans would not have developed and it would be very difficult to survive on earth if it were not for earthworms turning the forest leaves and dead pasture into topsoil.

Julius Caesar identified earthworms as beneficial and declared them protected. Earthworms live in the soil and the soil is the basis of our much valued rural economy which supports the larger New Zealand economy. Even Mark Weldon of NZSX is trying to get closer to the grass roots!

The soil which holds the nutrients, the organic matter, the micro organisms, and the earthworms must be nurtured and looked after. It is not somewhere to stand animals, over fertilise, abuse and allow the topsoil to be blown or washed away. More than that, it is not somewhere to dump and overload with effluent. In fact it is the very basis of all wealth. The world is short of food and where does food largely originate from? - the soil, and its resident family.

The soil is teeming with micro-organisms, fungi, bacteria, earthworms and so on. This culture is working away all the time whilst we walk on top of them. More than that, we force cattle, sheep and deer to stand on the soil and all those who live within it at ever increasing density. The animals are like "a sheep's foot roller" compacting the soil all the time.

Overdose that with high analysis fertiliser and nitrogen and the flora gets a bit "burnt". The nitrogen and phosphate attach themselves to the molecules and reduce the availability of other nutrients. People talk of cation exchange as being important and it is. Cation exchange is the ability of the soil to hold and exchange nutrients. Available calcium allows locked up nutrients to be freed and made available to plants. At the recent Field Day at Tatuani, at the Muggeridge's farm, it was reinforced how important lime was in good pasture production.

Dear old Professor Walker, now 87 odd, was in attendance explaining how he was asked to double food production in Britain during the Second World War, for goodness sake! And tell us he did. He said if you put nothing other than some lime on your land then you are doing well. Professor Walker was one of my lectures at Lincoln College.

And what is bone? Calcium.

And what is milk? Largely water and calcium.

Some pastures in the Waikato are looking dreadful and I would wager they need regular dressings of lime. At that Field Day 500 kgs per hectare annually was suggested. The fertiliser companies do not receive any money by advising people to apply lime. That is unfortunate. Imagine if they did, along with their own fertilisers and your lime, production and pastures would improve.

I am sure we are looking at the need for aeration. I am talking about 'Ground Hogs' and Ingles Soils Revitalisers or anything that will loosen up those compacted pastures. My first real selling job was on the 'Ground Hog' stand at the Field Days in the early 1980's where we sold heaps of them. Most are now parked under hedges but I am absolutely sure we need to get them out and use them again. Compacted ground and run down pasture can actually be returned into decent grass with a little help from an aeration system. If you dig into the soil with a spade you will see how compacted your land is. More than that, once you use the 'Ground Hog' or aerator the white roots all running down the lines created by the aerator are visible and the pastures seem to rejuvenate themselves. This aeration is best carried out in the Autumn and by the way watch out for your water pipes.

We also need to introduce more rye grass and clover seed into our pastures on an annual basis. Dry summers, pasture pulling, pasture pest, compaction and overgrazing all play havoc with what we call 'permanent pasture'.

I recently saw in the South Island some pasture where a farmer had oversown 2kgs per hectare of white clover seed in with his fertiliser late in March. The results were nothing short of spectacular.

SUMMARY

So let's get a more balanced view on what it is that underpins New Zealand agriculture on our own farms and our own prosperity. It is the soil and all who live within her, plus the feed that we produce. This is the basis of our wealth.

We need to think about what's going on under the ground and be prepared to introduce more species of grass. We should think grass first. We are really grass harvesters. We also need to think about lime and aeration. We need to focus on soil health and balancing it and growing more pasture and harvesting it well and the rewards are ours.

These are the opinions of Don Fraser of Fraser Farm Finance. Any decisions made should not be based on this article alone and appropriate professional assistance should be sought.

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