

## Don, Margaret & Adrian Thurston

Dairy, Colyton – Feilding  
222ha (121 h, 20ha run-off, 81ha leased)

29 years of dicalcic use

Application: Dicalcic / Potash / Sulphur @ 500kg/ha + 500kg/ha Lime

**‘Lime has always played a vital role in farming. When I was a kid I was very aware of how much lime was being applied to farms,’ recalls Don. ‘I can still remember the stockpiles of lime at the side of the railway line at Taonui. My father, on frequent occasions, used to remind us of the many tons of bagged lime he carted from railway trucks to farms in the district. Some of this was mixed with superphosphate on the floor of sheds, then spread by various means, a lot of it spread on the hills by hand. The whole process must have been damned hard work, and if they didn’t see results with it, they would never have carried on. That’s where my appreciation for what Hatuma do to manufacture the dicalcic came from. This was followed up later when the Colyton Young Farmers Club went for a trip to Hatuma. After a tour of the plant, Joe Topp gave us a very stern lecture - the answer lay in nurturing the soil - today called sustainability - followed by some much appreciated hospitality!’**



## ‘Having high quality feed that the stock can easily utilize is the key to our operation, and the dicalcic and Cropfine ensures that is achieved.’

Adrian Thurston



There's a generational change happening where the crucial old practices are being discarded. Having a hay contracting business, the topics of fertiliser and grass growth are often discussed. Perhaps I am a little one-eyed, but we do see the results of various fertiliser applications. I have a genuine concern that there is nowhere near enough lime being applied for what the modern farmer is expecting to get from his soil. I've seen farmers move away from regular liming, substituting it for high analysis fertiliser, and for the first couple of years they have achieved good results based on what organic matter they'd built up. I believe that the time is rapidly approaching when some of these farms are going to have to start their build-up cycle again.

Some people spread lime every four or five years, but I believe it should be applied every year, if possible. I well remember properties in the district that had rushes almost to the top of the fences. Lime played a big part in transforming this land – I hope the rushes don't get a chance to come back.

I have a real concern about the graduate training of a lot of our so-called advisors in the fertiliser industry who are advising against the need for the application of lime and do not understand the qualities of dicalcic, but see themselves fit to criticise it. They have traditionally arrived and tried to tell us that we're going to go backwards by using dicalcic, but we're still here, still producing, and after all these years we have yet to see the animal health problems they suggested we'd get. The biggest issue is they don't understand dicalcic, so they try and tell us every reason why it won't work, but after decades of successful farming with it, who's right? Perhaps their lecturers should try practical sustainable farming.'

'It doesn't take a lot of dicalcic to turn a property around,' says Adrian. 'Over the years I've seen places flogged due to savage cropping, and with only a sniff of dicalcic the

clover has come back. It's the places that are rapidly losing their clover that concern us because it doesn't have to be that way. For the type of farming we do here, we've got plenty of clover, always have had.'

'The soil's condition is number one. It's got to be,' says Don. 'If you haven't got that working right then nothing else will. We witnessed a tractor discing a paddock recently, and the topsoil came clean off the clay because the soil's condition had deteriorated so much. At the end of day if you've got your soil right, hopefully you'll make some money. Everything else is relying on it being right.'

'We're very happy with the production we're getting off this place,' says Adrian. 'Having high quality feed that the stock can easily utilise is the key to our operation, and the dicalcic and Cropfine ensures that is achieved. We're prepared to buy in feed if we have to, but generally we keep big reserves of it already up our sleeves in case. We run around 400 cows, but that changes depending on the seasons. We don't put a high emphasis on recording production figures because they don't mean a thing at the end of the day. It's making the best decisions at the correct time that helps your bottom line.'

'Nutrient budgets are the hot topic in the dairy industry at the moment,' says Don. 'In my opinion they're an unfortunate waste of time. Instead of making them

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► compulsory and producing pages of debatable figures, the industry should be focusing on suggesting the use of products that will lesson the nutrient loss. Our soil test results prove that the phosphate in the dicalcic doesn't run-off which is a huge advantage.

Hatuma has always been very good to deal with and we appreciate the relationship built up with Roger Gray over many years. Our fertiliser philosophies are very similar. I'm a firm believer in dicalcic and lime, and when recommending it to other farmers I have always emphasised that I would be pleased to hear from them if they do not get the desired results. I'm still waiting! With aerial topdressing taking out the hard work and with the transport industry as it is today we won't see the stockpiles of lime at Taonui again, but I believe they played a big part in lifting the production of this district. We all have a responsibility to leave the land in a better state than it was when we started.'



## Soil Report

Thurston Farm, Colyton, 222ha

Application: Dicalcic / Potash / Sulphur @ 500kg/ha + 500kg/ha Lime

After hearing the old stories about bringing the Manawatu floodplain soils into production with lime and dicalcic phosphate, and seeing first-hand the effects of soil conditioning on physical properties and production, the Thurstons are strong supporters of both lime and dicalcic phosphate. Twenty-nine years of consistent lime and dicalcic use on the Thurston dairy farm have given impressive results.

The excellent physical properties developed in this soil over time prevented any significant negative impacts from a long wet winter and cold spring, with the Visual Soil Assessment still scoring well at 36.5 out of 38 for soil indicators and 37 out of 38 for plant indicators. The topsoil is 40cm deep, with a strongly developed polyhedral

structure, friable character and very deep and extensive rooting. Worm counts were high, averaging 37 very large worms per 20cm cube (9.25 million per hectare). With the continual cultivation from this worm community estimated at 2,220 tonnes of soil being turned over per year, this performed a crucial role in preventing the structural damage that similar soils in the area experienced due to the wet winter.

The high level of biological activity in this soil has been built up through long-term soil conditioning, resulting in a pH of 6.8, calcium base saturation of 81%, plentiful available phosphorus, and good organic matter levels of 9.5%, providing abundant food. The high organic matter levels have contributed to a cation exchange capacity of 21 me/100g and the

base saturation is 94%.

The mixed pasture and clover-only herbage tests show medium levels of all macro and micro-nutrients, in good ratios, with no deficiencies. Digestibility is good at 74.5% and metabolisable energy is high at 12.1 MJ/kg. The excellent nutrient and energy status of the pasture ensures its palatability to stock. High palatability means that stock readily clean up all the pasture, with no rank patches, allowing quality grass to come away fresh, resulting in a positive feedback loop of good nutrient and energy status and high palatability. The stock receive the benefits of good nutrition and easy digestion, minimising stress on their systems and ensuring very few animal health problems. Stock are healthy and content, and milk well.



Excellent soil physical properties