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DoloZest® News

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Functional Fertiliser Ltd



Getting back to basics

Production from two paddocks of a swede & kale crop grown in Galatea (50km inland from Whakatane) was recently calculated. One paddock measured conservatively at over 10 tonne and the other at over 12 tonne DM/ha.



The soil this crop was grown on is some of the lighter in the Valley. The Cation Exchange Capacity is 11 me/100g, which means nutrient storage capacity is low and there is little natural fertility to draw on.

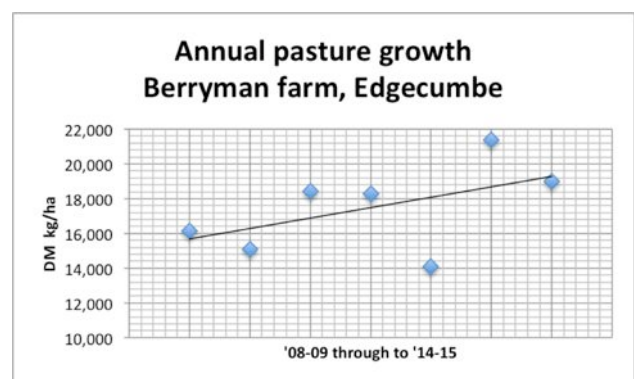
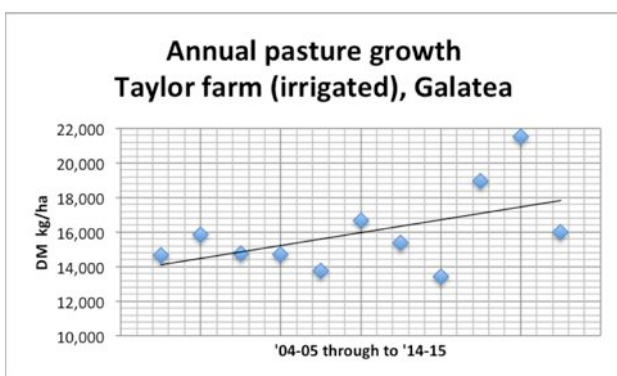
This area has received CalciZest plus phosphorus, potassium, and elemental sulphur in late winter/early spring and DoloZest + phosphorus, potassium, and elemental sulphur in autumn. Approx. 100kgN/ha was applied in January after significant rain had fallen.

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Humus is regarded by some as being more valuable than gold. However, we could live without gold, but our high tech world is dependent on the health of the top 20cm of our soil. And the most important component of soil is humus. Humus is what remains after the natural decomposition of plant and animal residues. It's where moisture and nutrient are stored and is largely resistant to damage by treading and weather extremes.

For generations it has been accepted that it is under grazed pasture that humus is most rapidly built, with the result being a steady increase in top soil and subsequent above-ground production.

The following two graphs are from clients' properties, both intensive dairy operations using DoloZest/CalciZest based nutrient programmes.



The best data we have indicates that other pastures in similar conditions using conventional N-driven nutrient programmes seldom grow more than 15,000kgDM/ha annually, down from 18,000kg 35 years ago.

The decline has been largely blamed on clover flea and weevil, and more recently on droughts. In the eight years of data from the Berryman property two were officially drought declared, yet the overall trend has been upward.

An article by Philippa Stevenson on the 2004 Norman Taylor Lecture presented by NZ's then most respected soil scientist Dr Graham Sparling contains the following passage.

What he (Dr Graham Sparling) finds depressing is that we have trodden such a well-worn path. Like a little brother, we have raced to catch up in the degradation stakes with our older American and European siblings. In just 150 years of intensive agriculture New Zealand has done a good job of matching the problems being reaped from thousands of years of Northern Hemisphere settlement. "It's been more rapid and acute here and we've carried on when 30 years ago the consequences were obvious in America and Europe. We've not learned the lessons."

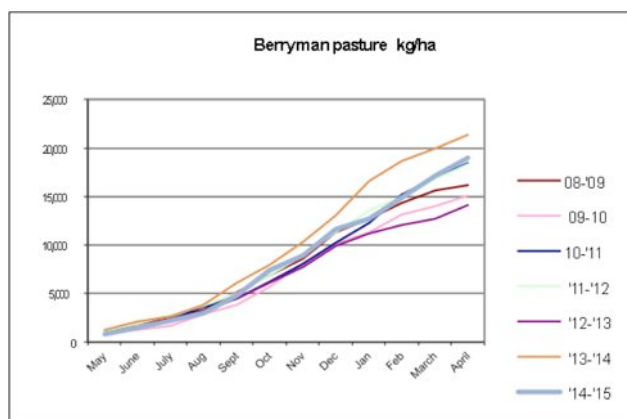
While the logic behind the current mainstream fertiliser programmes appears sound, the premise that without fertiliser nitrogen less would be grown is false. Thus the model is fundamentally flawed.

And so to the money....

The independent analysis by Mark Macintosh of AgFirst Whakatane comparing the performance of the Berryman property to District Average for the 2011–12 season included a Gross Margin/ha figure of \$5,936 compared to the District Average of \$4,315.

The payout figure used for that exercise was \$6.00/kg MilkSolids, and based on the District average farm size of 114ha the financial advantage was **\$184,794**.

The pasture growth in April 2015 of 70kgDM/ha/day gave a total pasture production for the twelve months of 18,976kgDM/ha.



For the following exercise values of :-
 19,000kgDM/ha for the Berryman property
 15,000kgDM/ha as the District Average growth
 10c the cost of growing 1kg of DM
 and a payout of \$4.50/kgMS have been used.

	Berryman	District Ave.
Pasture grown	19,000 kgDM/ha	15,000 kgDM/ha
Feed/kg MS	15.4 kg DM	19.5 kg DM
kg of MS from pasture	1,048	654
Income/ha	\$2,816	\$1,443

This shows a per hectare advantage of \$1,373/ha for the latest season.

The District Average farm could therefore have benefited from an extra \$156,522

The amount and cost of bought in feed, grazing off, and the effect of wintering at home would need to be calculated before accuracy can be claimed, however with the cost of bought in feed at 30c/kgDM being unprofitable at present payout, profit is only achievable from pasture.

With the Berryman property growing approximately 30% more pasture than District Average and 20% less being required to produce a kilogram of milksolids, the financial advantage is substantial.

The final sentence in the conclusion of the AgFirst report with regard to the Berryman property states *"This is a very efficient farm system which produces a high farm profit and has less impact on the environment."*

More detailed information and measures on the farm's environmental impact will be in the next DoloZest News.

We're currently updating our company name to Functional Fertiliser Limited

Everything else stays the same. Same people, same products, same outstanding results 😊

Regards,

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