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DoloZest® News

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It's Sunshine that matters

Usually winters fall into two categories, certainly the memory of winters falls into either cold and dry, or wet and warm.

Over the last thirty days we've had a taste of both. Excessive rain along with cold frosty conditions.

Many prefer the dry and the cold. Pasture utilisation is high and there's minimal soil damage. Once the sun emerges in the morning both people and animals warm quickly and there's genuine pleasure in being outside working with stock.

We've had neighbours who preferred the wet warmer conditions particularly when farming browntop pastures on free draining soils, however, really strong spring growth is always delayed as it takes time to warm the moisture in a soil that's been wet all winter.

Predicting spring pasture growth

10°C is the soil temperature where there's a noticeable lift in both pasture colour and growth, attributed primarily to an increase in the speed at which nutrient is cycling.

Over autumn and winter there's been a digestion process in the soil with last season's root, dung, and other organic matter being worked on by beneficial bacteria, fungi, earthworms, and other soil dwellers.

The release of nutrient, including nitrogen, once soil temperatures are sustainably above 10°C results in a steady increase in pasture and plant growth.

Pasture urine patches become noticeably greener due to higher concentrations of available nitrogen. It's a temporary phenomenon and by late September healthy pastures will be uniformly green.

Nitrogen for spring growth

The amount available from a well-structured biologically active soil as soil temperatures increase is many times that which can be applied in the synthetic-N form.

And it's now almost past the point at which applying nitrogen will make an appreciable difference to the period during which feed is at its shortest, the second half of September.

Nitrogen should be applied at least 6 weeks prior to spring grazing so only in the cooler areas might a light application of synthetic-N be beneficial.

Pasture cover over winter

Below are recently taken images of pasture on Stuart Pritchard's grazing property at Otaki.

Both the stocking rate and grazing interval have been



determined by the goal of maintaining high levels of cover throughout winter.

That's not always achievable however it is in our view far preferable to setting a stocking rate and attempting to make pasture covers and animal condition fit.

Adjusting the stocking rate to match the feed available over winter is being introduced on larger properties through grazing off and higher levels of supplementary feeding.

There's no absolute rights and wrongs, each situation is different and everyone's tolerance of running available feed to the minimum varies. Those that have made the change to having more feed ahead during winter appreciate the peace of mind that comes with being less beholden to the vagaries of September weather.

"Interested in the bit on grass grub in latest DoloZest news. Here is my 2 cents worth, one paddock had DoloZest/CalciZest about 18 months ago and I cannot see any grub, but the one next door, without any fert has severe damage. I know it is dangerous to jump to conclusions but there could be something going on here. K G

Change of ownership

Late last week Concrete & Metals Tasman Bay Ltd became the owners of Functional Fertiliser Ltd.

It makes no difference to the delivery of CalciZest or DoloZest and the total nutrient mixes that have been delivered since 2003.

All stores throughout the country will continue as they have over recent years. Peter & Coralie are still onboard and will now have more time for client support.

Concrete & Metals have a network of people and infrastructure throughout the country which provides a strong base from which to further grow the Functional Fertiliser business.

The timing of their involvement we believe could not be better as the increase in the cost of imported, particularly high analysis products has escalated over the last six months and the interest in alternative environmentally sustainable options steadily increases.

Although the price of crude oil is now significantly lower than two months ago any reduction in the cost of imported products will take time, and a reduction to February prices is unlikely.

The slight increase in the cost of CalciZest and DoloZest has been forced due to an increase in internal cartage prices and is only a fraction of the increase of imported products. We're working hard on efficiencies that will enable any further increases to be minimised.

This advantage over the cost of imports means the value of both CalciZest and DoloZest based programmes, that provide an increase in yield around 30%, has again risen.

Horticulture and cropping

The earliest independent trial work carried out was with DoloZest applied to a commercial tomato crop in late 2003, with the crop harvested in April 2004. The result was an increase in usable yield of 36%, with a slight increase in brix levels.

The focus of Functional Fertiliser has been pasture, the industry we know best, however if it's grown in soil the benefit is consistently an increase in total yield, along with a measurable lift in quality.

Results from apples and pears to which DoloZest and CalciZest were applied in spring last year have been encouraging, however it will take time to accurately substantiate the gains.

Pest and disease

We subscribe to the philosophy that pest and disease are nature's way of ensuring only the strongest plants survive and produce the seed for future crops.

Pest and disease attack the weakest plants with the strongest surviving, but simply leaving crops

unprotected is seldom a viable option. Pesticides and fungicides will remain valuable resources, however markets are demanding less input for top end produce.

The most effective long-term defence is growing plants, and animals, that are unaffected by pathogenic fungi, bacteria, and internal parasites.

Functional Fertiliser products and programmes start with soil, and when soils are truly healthy the plants that grow there, and the animals grazing that land grow faster and require less support.

Brix is the ultimate measure and just as useful on pasture as it is with fruit. It's a measure that is constantly changing and it is only over an extended period that it's value can be fully appreciated.

Whether growing fruit, pasture, or cut flowers, it's a process of energy conversion. Sunlight is the primary source and through photosynthesis it is converted into something we can eat or utilise in some other way. It's the efficiency of that process that determines our success as grower and farmers, and it ultimately starts with the soil.

Carbon sequestration and nitrate nitrogen

Soil is either gaining or losing carbon; there is no constant, and to move forward with confidence it's necessary to know that carbon is being steadily sequestered. The work undertaken by Rod McMillan with funding assistance from AGMARDT has provided sufficient measures for us to be confident that CZ/DZ based total nutrient programmes are sequestering carbon and can be claimed as Carbon Positive.

Where carbon is being sequestered nutrient, including nitrogen, will be held and made available for plant uptake as required.

The result of the Nitrate-N work undertaken by Scion on the Berryman property in 2011 showed a 70% reduction in Nitrate-N entering groundwater. This was compared to the neighbouring intensive dairy property at the time applying 300kgN/ha.

CalciZest for Spring

CalciZest was designed primarily to increase the growth of clover throughout the growing season, and independent monitoring showed twice the clover content over the 4 months of September to December.

A 350 – 400kg/ha application to pasture as soon as practical ensures sufficient nitrogen fixed for maximum pasture growth with the added benefits of outstanding animal performance.

Attached is the current CalciZest tech sheet and for further detailed information please phone Peter or Coralie on 0800 843 809