



Drought broken

The drought is broken and with the rain here there will be a scramble for fertiliser.

HOW WILL YOU MANAGE YOUR AUTUMN PASTURE GROWTH?

More urea for instant green, high-nitrogen, watery pasture your stock will negatively react to or will you consider the livestock under your feet? The beneficial bacteria, fungi, protozoa, nematodes, insects, mites and earthworms that are your natural soil workforce, eager to supply a balanced diet of plant-available nutrients such as nitrogen, calcium, magnesium, phosphorus, potassium, sodium for

pasture growth. EF fertilisers are soil and microbe friendly, improving your soil's microbial balance, natural nitrogen-fixing and microbial-cycling ability, sequestering atmospheric carbon dioxide and manufacturing humus to house more microbes, build topsoil and increase nutritive value of pasture to stock.

Our fertilisers are inoculated with beneficial microbes (Azotobacter, Bacillus and Pseudomonas bacterial species, Trichoderma and mycorrhizal fungal species) and composted which adds greater fertility-building value by promoting humus creation in soil and

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Beyond Organics™

Dr Greg Tate has Retired

Greg made a life-change; he left a life of researching plant pathology and entered the world of building soil fertility when he began working with Environmental Fertilisers around 7 years ago.

Greg has enjoyed improving soil fertility and escaping the "conventional

paradigm and never been more satisfied with my work. I just wish I had known all this 30 years ago."

Greg's last day was the 19th of April, and we had a few of his valued friends and clients over for a bbq to see him off. He will be moving to Turangi. "It's not the seaside, but lakeside is the next best thing".

Greg has been a real asset to the company and he will be sorely missed.

**SAVE
50%
ON YOUR
NITROGEN BILL**

**Add EF Humates
@ 5% and reduce your
Nitrogen applications**

Drought broken continued...

providing nutrients for plant growth. Both free-living Azotobacter and clover-nodule Rhizobium bacteria fix free nitrogen from the atmosphere. Pseudomonas bacteria and mycorrhizal fungi solubilise locked-up inorganic phosphate, store calcium, build soil structure and sequester atmospheric carbon into soil humus – key things that conventional fertilisers do not support. EF Biological Fertilisers house, protect and feed beneficial microbes and contain plant-available nutrients that are not subject to leaching or greenhouse gas emissions.

Biological fertilisers, by drastically reducing nitrogen inputs, also replace the need for nitrogen or nutrient budgeting required by some councils. This imposition on farmers is a direct result of the increasing inputs of urea over the last few decades which has seen soil carbon levels, soil health and water quality plummet and stock health problems escalate. Our safe alternative to urea is Bio Rocket.

Soil microbes can build new topsoil and deliver nutrients free to your pasture if you look after them, while chemical fertilisers and herbicides degrade soils and discourage or kill microbes. Some signs of a degraded soil are compaction, poor root penetration, reduced earthworm numbers, runoff, drought-proneness, inactive clover nodules, weed infestation, increased pesticide usage and high vet bills.

Your soil is your greatest farm asset.

Our message to you is this: persist with a biological soil fertility programme if you want long term farm sustainability. Don't be tempted by cheaper fertiliser mixes; as the saying goes, 'you get what you pay for'.

Don't leave it too late, with the rain here it could get really mucky! Contact Environmental Fertilisers for your autumn requirements on 0800 867 6737.



Nitrogen Efficiency – Reducing your Nitrogen/Urea bill by half

With nitrification inhibitors like DCD gone, what are the options for farmers using synthetic nitrogen like Urea, Sulphate of Ammonia and DAP?

The answer has been out for over 10 years, for some reason a leading soil scientist from a prominent university in New Zealand did some trials with soluble humate granules mixed with a nitrogen source. The results were outstanding: 30-40% reduction in ammonia volatilisation and a 35-40% reduction in nitrate-nitrogen leaching.

These figures basically meant a farmer/grower using this technology could halve his nitrogen bill. The only issue with this technology was the cost of the soluble humate granules, (cost \$2500/tonne and the recommended mixing rate was 5-10%- which basically increased the cost of each nitrogen application by \$125-\$250/tonne of nitrogen used).

Over the Christmas break and into the early parts of this year Environmental

Fertilisers had been working on the high cost issue and have secured the rights to the same product (Soluble Humate Granules). We now have it available on the market for \$600/tonne (saving \$1900/tonne). This has significant cost savings by reducing the on farm costs of nitrogen applications in excess of 50%.

Environmental Fertilisers have also developed a urea/humate mix and is applied at reduced rate of 40-60% of normal nitrogen applications.

The key to any nitrogen application is to apply the nitrogen with a carbon source. And this carbon source needs to be soluble like Urea is when you put it into a bucket of water, so don't get fooled by those selling Humate Powders (they are very slow release and they are not capable of giving the same benefits that a soluble humate can especially with Nitrogen applications).

There are huge benefits here for the farmer/grower financially and also environmentally. There are a number of soil health benefits that come with adopting this technology.

Green grass in a drought

“And how is it there is green grass there when there is none in the rest of the country?”

Was one of the comments on facebook about Sundaise Festival (www.facebook.com/sundaisefestivals) held on Rachel Sorley's farm at Dickey Flat, Waihi, on the 9th & 10th of March.

Could it be the benefits of feeding the soil with Environmental Fertiliser's products?! This is with only 54mm of rainfall this year.



Highland cow grazing 3 days after Sundaise Festival where over 1000 people have been walking through that entrance archway.

Hauraki Plains Hemp Crop

This summer we decided to trial growing a hemp crop on some very flogged out maize ground.

The marine clay had been experiencing diminishing maize yields and returns over the last 5 years to the point where the land owner wasn't prepared to risk (financially) another crop of green feed maize.

So after a few home brew rums we came up with a lease agreement and plan.

With a Reams Soil test and Lismore Soil test results in hand we applied a 14 tonne per ha fertiliser mix comprising of 10 tonne/ha of compost and 4 tonnes/ha of minerals, comprising of paramagnetic rock dust, Soil Force, Soil Conditioner, trace minerals, microbial feeds and microbial inoculations (Bio-Vam, 10/25 and Combo-12).

After obtaining a license for growing Hemp, we proceeded to plant and learn.

We finally harvested the crop and dried the seed and have harvested 750kh/ha of seed, we plan to extract the oil from this seed and then market it, as it will be the first North Island grown Hemp Oil for sale in New Zealand.

Next year we plan to harvest the fibre and herd from the plant, however this year with the soil being in very poor condition we have decided to put all this fibre back into the ground.

Hemp Oil is one of the most beneficial oils for human health, having an ideal omega 6 to omega 3 ratio even superior to olive oil and avocado oil.

Only Hemp Seed Oil contains-

- Omega6, Omega3 and GLA (gamma linoleic acid- 2.5-3% of volume)
- 75-80% polyunsaturated fatty acids which is the highest in the plant kingdom and unique amongst seed oils.

The Chinese grow in excess of 100,000ha of hemp a year, and a recent trial with military troops going into adverse battle conditions, clearly showed that the troops with hemp clothing/uniforms didn't suffer the skin disease that the troops dressed in cotton did.

Environmental Fertilisers Maize Block



Grant Paton planted out an old, very depleted maize block with the following mix:

The same mix as went on the Hemp Crop (below), plus 1kg/ha BioVam and 1kg/ha Combo 12. The starter fertiliser was only surface applied due to time constraints, but the results! The local contractor is suggesting we have yields 40-50% above the regional average - on only 50mm of rain.

It appears that the Hemp uniforms act as a disease suppressant.

While the industry is very young in New Zealand it has huge potential in the health, building and clothing industries.



Fluoridation of water supplies and toothpaste

Based on wrongly-interpreted observations by 'health professionals'; a waste-product disposal solution, and profit for the aluminium and phosphate industries.

The children of Deaf Smith County (Texas, USA) were found in the early 1950's to have significantly lower tooth decay than other areas, and the ground water to have higher than normal fluoride content. Following an investigation by the American Dental and Health authorities it was concluded that the fluoride in the water (about 1 ppm) was responsible for the low incidence of tooth decay, hence the fluoridation of all drinking water supplies in the USA began. We in NZ are also recipients of this decision since NZ Dental and Health authorities generally uphold their conclusion as 'settled science'. But was it good science and is it settled?

Famous American soil scientist Dr William Albrecht explained the 'correlation'. Fluorine in soil is highly active and soluble and rapidly leaches into ground water supplies, leaving the calcium and phosphate-rich apatite rock to release these plant nutrients to crops which provided mineral-rich, superior nutrition for families in the area. The result: reduced incidence of tooth decay.

John Lee, a physician, found that fluorine, the lightest and most reactive of the halides (Cl, Br, I, F), is the most potent

enzyme disrupter of all elements. It poisons enzymes by tenaciously binding to the trace elements essential to their function, thereby blocking their action. In this way it shuts down 71 known enzyme-catalysed reactions in humans, plants and animals.

Worse, fluorine is a gene poison (is mutagenic) at the doses administered in water supplies so that normal healthy gene expression is disrupted. During the second WW Hitler had his scientists hunt down an odourless drug that could be unobtrusively added to German water supplies to make them more docile and open to suggestion. Chemists at IG Farben came up with sodium fluoride, which at very low doses produces a marked weakening of the will to resist domination. This was also used in concentration camps to keep prisoners docile.

Richard Olree, an American chiropractor and geneticist declares fluoride a serious poison which also binds lithium, crucial for emotional stability. Prozac, a pharmaceutical drug arose from the German experience with fluoridation. It is fluorine-based and renders kids and adults with neurological disorders docile. If iodine levels are low (very common) fluoride displaces iodine in the thyroid gland. This results in hypothyroidism and a need for thyroxin supplementation in people taking Prozac.

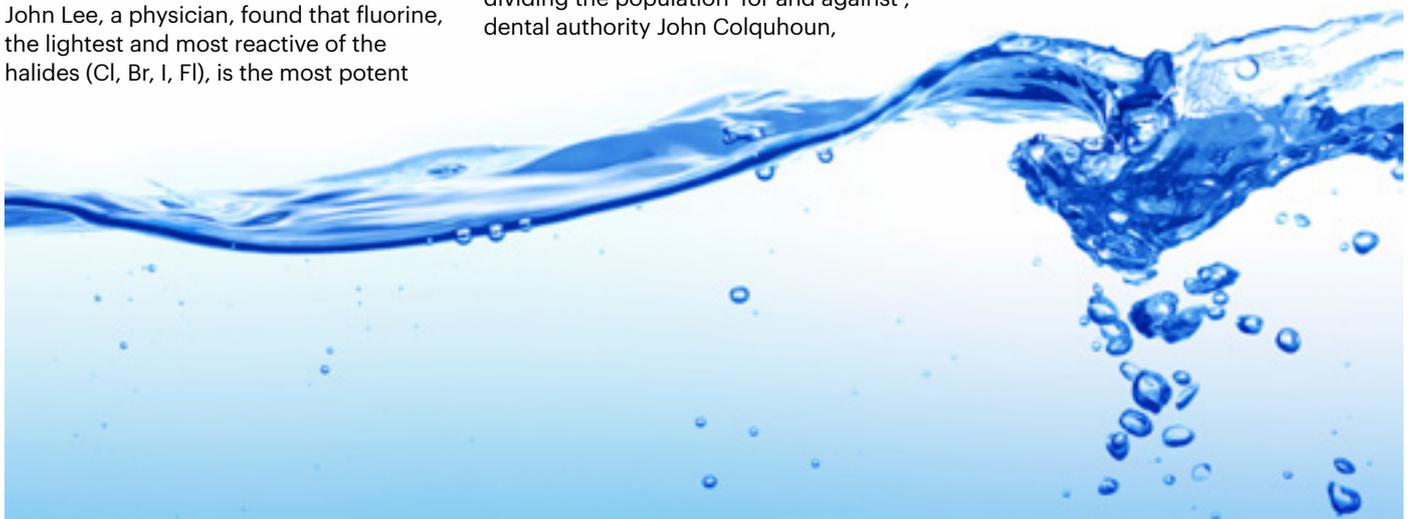
In 1980, when fluoridation here was dividing the population 'for and against', dental authority John Colquhoun,

Auckland, studied the effect of fluoridation worldwide (including NZ), and found no evidence it reduced dental caries. He recanted his stance on fluoridation. But big industry (including Health) has a powerful influence on Government and his findings fell by the wayside. Paradigms are powerful and people will sincerely believe a lie if they hear it enough times from authorities.

To make matters worse, aluminium is added to water supplies to remove turbidity and added to most pharmaceutical drugs and cosmetics like antiperspirants. Aluminium is a human toxin which suppresses boron and yttrium, both with essential functions (B for Ca uptake and Ca, Mg and P metabolism; Yttrium for absorption and distribution of Selenium, essential for cancer prevention). Aluminium plus fluoride in your body are a recipe for Alzheimer's disease, an increasingly prevalent disease in older NZers and a truly horrible disease to inflict on any family.

What can you do about stopping fluoridation of our drinking water supplies? Go to the Fluoride Action Network NZ (inc) www.fannz.org.nz. You can find out if your water is fluoridated at: <http://www.drinkingwater.esr.cri.nz/supplies/fluoridation.asp>.

Ref: Minerals for the Genetic Code by Charles Waters, Acres USA.



Recent farming controversies

If you read the recent Straight Furrow and Coast and Country newspapers you will have read the claims and counter-claims regarding DCD's usefulness in reducing nitrification and the loss of N by leaching and atmospheric emissions.

Your position on this issue will depend on your farming paradigm. If it's a conventional chemical farming paradigm the loss of DCD will be a nuisance and you won't be too concerned about 'toxin' build-up in the soil. 'Just collateral damage we can live with. After all we don't really know much how soil works, and chemicals like Roundup are so useful for spraying out pastures. 'Also, scientists can be trusted to look after our soils, right?' Yeah right!

The problem is that soil is a complex living system that is affected by chemical inputs like Roundup, pesticides and acid chemical fertilisers. Any input that upsets the natural biological balance in the soil affects the nitrogen, carbon and other cycles mediated by microbes, and ultimately, soil health and productivity. The 'biological farming' paradigm understands the critical importance of beneficial microbes and the soil food web to soil health and productivity and farming sustainability (the in-word used even by the least-sustainable industry participants to sell their products).

I fully embraced the biological farming paradigm after 35 years of being blinkered by conventional university training and R&D funding by chemical companies. The amazing thing is that it took 35 years for me to see the truth. That's the power of paradigms. International soil nutrition experts like Arden Andersen are bad-mouthed by NZ conventional 'experts' like Doug Edmeades who strongly repudiates his teachings, but I thank God for Arden and others like Elaine Ingham who come here to share their expertise and put us onto a truly sustainable track.



Phyllis Tichinin is to be congratulated for standing up for the truth about sustainable soil management and deleterious farming practices like heavy N use which shuts down the N cycle, depletes soil carbon and necessitates industry 'band-aids' like DCD and Nitrogen Budgeting to save our environment. Nitrogen budgeting wouldn't be necessary under a biological paradigm, which greatly reduces synthetic N inputs.

Dr Phillip Schofield (soil scientist) has spoken against unsustainable conventional farming practices and Dr Frank Rowson (veterinarian) on the evils of Roundup as a soil, plant, animal and human toxin.

Grant Paton is to be congratulated for lifting the lid on GMO feedstuffs in dairy farming as well as GMO chicken feed and chicken manure. GMO contaminated animal feed should not be allowed into the country under any condition. But those who should be protecting us have been quietly approving their importation. GMO feeds are endorsed by Fonterra, science, industry, EPA and Government. I find it amusing that Fonterra is now giving priority to Farming Sustainability. Also, MPI is investing \$1.6M into greenhouse gas research. Mitigation research no doubt, with no thought of prevention by investigating the effect of biological agriculture practices on GH Gas emissions, or the storage of carbon under permanent pasture.

Grant's comments on halving urea costs by mixing soluble humate granules could significantly help to reduce greenhouse gas emissions (but this would affect fertiliser company profits). All who blow the whistle on environmentally-damaging, non-sustainable farming practices are to be congratulated. The list of biological farmers is growing, and so is the number of professionals who have changed their stance to biological farming and are speaking out.

Thoughts to ponder

Burning 1ha of grasslands creates worse pollution than 6000 cars.

Did the culling of 40,000 elephants in a National Park help reduce the rate of desertification. A- No it actually accelerated it.

A team of International Scientists came to the conclusion that Natural Desertification of National Parks in America was a result of - "Unknown Phenomena's "

Mimicking nature and correct management with animals resulted in a 400% increase in productivity.

Would the elimination of burning fossil fuels stop climate change - No it won't because there is a bigger dynamic at work.

Anything that digests lignin will produce methane; so stop blaming the cow, soil microorganisms will also do it. With cattle and a healthy living soil the methane will be broken down to carbon and water by soil micro-organisms.

Livestock are critical at restoring desertified soils; look at the great migrations of the wilder beast and the bison.

Two new studies released in late March add to the solid body of scientific evidence showing that common pesticides are directly harming bees. The insecticides in the latest studies, neonicotinoids + coumaphos, scramble the circuits of bees brains. This leaves them unable to learn, smell or remember.



BAS 50

Environmental Fertilisers has secured the rights to a superior very fine micronised basalt rock dust that has been selling for \$350/tonne. At the moment we are selling it for \$80/tonne.

Why Foliar Spray Pasture?

Haven't I enough to do without having to follow my cows around with a spray rig?

WELL, THE FACTS ARE:

- Foliar feeding is 8-20 times more efficient than feeding via the roots. 80% of the product will reach its target compared with only 10-30% when soil applied. That's why high value crops are regularly foliar-fed during the season.
- Yields and sugar levels can be boosted by correcting nutrient deficiencies before losses are sustained.
- Huge leverage is possible with small inputs; ie, very cost effective.
- Even conventional farmers are using this technique to advantage to grow grass. Biological farmers commonly use this technique.



REQUIREMENTS:

- What you apply should be based on a leaf (pasture) analysis and leaf sap brix levels. If levels of key minor nutrients are deficient both leaf sap brix (sugar levels) and disease immunity will fall.
- But, soil must be balanced to supply the 20% of pasture energy needs that come from the soil. The other 80% is solar energy from the sun.
- And, the best result depends on adequate Ca-availability to pasture (2000-3000 kg/ha). Get your Reams Ca levels up!
- Apply via hollow cone nozzles ideally, but rose nozzles will do if blockage is an issue.
- The spray mixture pH should be close to pH 7; conductivity 1.5-3 micro Siemens/cm.
- Apply at critical stages to avoid chlorosis, eg crops: 3rd to 6th leaf stage and 2 weeks prior to flowering.
- Purchase a sprayer designed for the job. Herbicide sprayers often do a poor job.
- Apply to recovered pasture preferably in early morning or evenings.



HINTS:

- Foliage Ca, B, P & Mg at luxury levels maximises photosynthesis, yield and quality.
- Include a natural chelator/plant growth stimulant like fulvic and humic acid.
- Avoid hot days and the six days prior to new moon.
- Anionic spraying in spring can lift milk production and cash flow.
- Foliar spray to offset soil nutrient imbalances while they are being worked on.

EF FOLIARS:

Combinations of these are used for different crops and situations; eg, Humus Builder, Nitro Cal and Vegetative or anionic mineral mixes for pasture spraying; Reproductive for inducing flowering/fruitset.

- EF ACE (fulvic acid)
- Liquid Bio Char
- EF Cal Phos (for calcium and phosphate)
- EF Fish Plus
- EF Cal Bor (for boron)
- EF Vegetative
- EF Humus Builder
- EF Reproductive
- EF Liquid Kelp
- EF Bio Cal (micronised calcite)
- EF Chelates (such as iron, zinc, manganese, selenium)

Our Goal

To maintain and grow your soil health & productivity, pasture & crop yields & profitability by supplying fertilizers producing mineral-dense feed/food.

Our Motto

Healthy soil, healthy pasture/crops, healthy animals, healthy consumers.



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