

# THE Tow and Fert TIMES

**TOW AND FERT**  
BY METALFORM

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## PAGE 2: EXPERTS CORNER | Canaan Ahu

Well known in the south island Canaan Ahu is helping farmers improve their farm through improving their soil health.

Getting off the 'N' Death Cycle and On the Healthy Soil Wagon

## INSIDE: THE SCIENCE

Foliar application of fert has many benefits but where is the science??

Hint - It's right here! →

## IT'S (NOT) ALL ABOUT 'N'

An entire eco-system of benefits can be gained on farm when shifting away from high 'N' inputs.

For many years now the spotlight of regulators, and farmers alike has been focused on the impact of 'N' based (and to a lesser extent P based) fertilisers in our farming systems and the environment. As farmers and farms around the country find ways of maintaining production with significantly reduced 'N' inputs, benefits are being seen across the fertiliser or nutrient input spectrum, benefits that extend to animal health, machinery cost and capital input reduction to increased dry matter (DM) production and soil health.

As Randy Newman sings in his 2003 song "It's a jungle out there", this simple idiomatic English expression has become a colloquial term of reference to the many and varied options available to farmers when looking at the nutrient inputs on their dairy farms.

With so many seemingly different systems with 'scientific' proof being readily available to 'prove' a systems effectiveness, or otherwise, discerning the 'jungle' of information and the benefits that can be gained, or lost, has become increasingly difficult to do. Yet in amongst all of this 'information' and use of 'inverted commas' there are many 'truths' that cannot be overlooked in moving the industry, and indeed individual farms, forward for the benefit of both farmer, farm, animal, and the environment.

But the question we are often asked is "Where do I start?" and the answer is not, we are pleased to say, "Well, it's a jungle out there!"

### NITROGEN EFFICIENCY – BIG GAINS. BIG SAVINGS.

By now most farmers be they dairy farmers, dry stock farmers or otherwise know the Nitrogen story. This essential plant nutrient has become the heroin we have addicted our farms too over the last 40-50 years. And yes, it grew grass, lots of grass. However, the unintended consequences of this addiction have now led to the situation where regulation has been imposed and limits put in place to restrict the input levels of this vital nutrient.

Far from the doomsayers who said, "it can't be done" or "this is the end of farming as we know it", reducing input levels of N would appear to have had little impact on production levels where alternative solutions have been sought. In fact, the weather remains the biggest determinant of a season's relative success or failure in terms of milk production (or protein) output. And, as has always been the case when New Zealand farmers have been faced with uncertainty or challenges, they have responded in innovative and effective ways to fix or manage a problem better than before.

Even now for many, the 'N' cap of 190units N/Ha is on the high side of 'N' inputs. We know of many farmers who have reduced their 'N' inputs well below 100units N/Ha through the clever use of alternatives such as fish fertiliser, humates, soil and biological conditioners and energy sources such as molasses.

The focus has shifted from simply "putting more on" to "how can I release the nutrients in the soil already and capture more of the atmospheric 'N' that is freely available."

With 78% of the earth's atmosphere being made up of Nitrogen, this source of 'N' is being accessed using clover and other legumes allowing significant 'N' input reduction and the natural recycling of this critical nutrient to plant growth. Out on-farm farmers are seeing the return of clovers into pastures, natural 'N' fixers, with the reduction in 'N' inputs. 'N' inputs such as Urea have served to suppress the growth of clover in pasture. Removing or reducing the inputs of 'N' have seen a re-emergence of clover and the many benefits that come along with their inclusion in pasture-based farming systems.

On the production side Dry Matter growth has either remained consistent or increased. However, that is not the only benefit being seen out on-farm.

### ANIMAL HEALTH – AN UNEXPECTED BENEFIT.



Healthy soil leads to healthy feed for the cows. The move to liquid 'N' etc can lead to big animal health benefits.

The process of applying 'N' fertiliser to pasture leads to an increase in DM growth that is proven and has largely led us to where we are today. However, what is lesser known is that the application of N fertiliser leads to an elongated cell in the grass that holds more water. This elongated cell and increased water value in the pasture then leads to less nutritional value to the animal resulting in high 'N' levels in both urine and faecal matter. The downstream effects of this significantly contribute to the leaching, runoff and volatilisation of 'N' that is causing so much of the environmental impacts of dairy farming in-particular.

Tow and Fert users across New Zealand and Australia who have reduced their 'N' inputs significantly using their Tow and Fert and applying a foliar form of 'N' have reported an improvement in animal health. The quality of the grass they have been growing has improved significantly meaning the cow is getting a healthier feed. Less 'water' contained in the cells of the grass mean the feed can be digested in a more efficient manner resulting in less 'N' out the back end.

And as farmers and Tow and Fert owners change and develop their systems using their Tow and Fert the addition of alternate nutrient products has seen many with further still improved animal health. Trace elements, minerals such as magnesium and lime, clover, and legumes etc are all being applied to provide animals with a rich and varied diet that leads many to say, "why didn't I do this sooner?"

Not only have these changes seen animal health improvements, a significant benefit and cost reduction, the benefits are being seen in soil also.

### SOIL HEALTH – ANOTHER UNEXPECTED BENEFIT

For agriculture the world over and here in New Zealand the use of Nitrogen has led to many farms having soil compaction issues. Soil compaction results in nutrients being locked up, increased leaching and runoff, a reduced resilience to extreme heat and heavy rain events, and generally less productive pasture systems.

With the reduction of 'N' inputs on many farms in New Zealand and Australia by Tow and Fert users we have seen huge improvements in the soil health of farms. Moving to a foliar applied 'N' system means that the solid 'N' application causing much of the compaction can be stopped and other, soil enhancing products such as bio-stimulants, fish fert products, minerals and trace elements, seaweeds, humates, molasses etc added to the mix and applied little and often to pastures as and when they need it.

Once again, the downstream effects of these products being applied readily would appear to be an improvement in soil health. It's friability increases, organic matter and carbon capture improves leading to soil that holds water far better than before. This reduces runoff and leaching significantly, whilst allowing for more water to be held in the soil improving the farms' ability to deal with drought or extreme rain events.

In short, these benefits allow the eco-system that is the soil-plant-animal cycle to perform as it should, or at the least, in a more efficient way that has benefits across the farm and the environment.

### BALANCE – WALKING THE FIGURATIVE TIGHTROPE

The days of simply "putting more-on" are over. Tow and Fert owners have been some of the earliest adopters of a low 'N' input system and their results largely speak for themselves. The soil-plant-animal nutrition cycle is a complex one and for too long we have simplified our input systems because of the results we have seen. As mentioned, the unintended consequences of this simplification have led to changes that are now ushering in a new way of farming.

Soil health is a complex topic and one best discussed with a qualified agronomist or consultant, however there are some simple tenets that assist with understanding the overall system as follows: *continues on page 2*

## EMISSIONS FRUSTRATION! Yet more regulation and cost?

Anyone who follows politics knows that politicians will change their spots depending on the prevailing wind direction of the day.

We see it every day with the government and opposition riding these winds and changing their positions based on the feedback of the prevailing wind; public opinion.

The current Emissions Trading Scheme (ETS) and the process He Waka Eke Noa (HWEN) went through in consulting with the wider agricultural industry has now reported back to government and made its recommendations for charging emitters for their methane emissions. If we look back at the history of He Waka Eke Noa it

was born from the exclusion of Agricultural emissions from the ETS. From our own Tow and Fert times Volume 7 you may remember:

"Importantly for farmers 'The Climate Change Response (Zero Carbon) Amendment Bill' placed greenhouse gases produced by ruminant animals into its own separate 'basket'. *continues on page 4*

Political protest in Morrinsville, the PM's home town.



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or email [sales@towardfert.co.nz](mailto:sales@towardfert.co.nz)

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# EXPERTS CORNER: CANAAN AHU

## BACK TO SCIENCE AND HEALTHY SOIL

He's a man about the South Island working on farms and with farmers as an independent consultant. For Canaan Ahu farm health is all about soil health.

Contributor article.

### GETTING OFF THE 'N' DEATH CYCLE AND ON THE HEALTHY SOIL WAGON

**Canterbury is often seen to be the promised land for dairy farming as we have the ability to irrigate the land and, when combined with good sunlight hours, extend our lactation days.**

On the flip side this means the land has the highest production expectations often resulting in higher geared systems which results in all manner of potential issues down the farm production line.

**At Soil Matters our focus has been in helping the dairy industry as independent consultants. The need for independent advice was something we saw farmers were continually seeking.**

Many could see there was a dire need to fix systemic animal health issues and poor grass production or to find a better way than simply putting more fert on their paddocks.

To date, in the dairy community, there has been little emphasis on the entire Nitrogen cycle yet significant emphasis has been placed on applied N resulting in increased DM growth. The atmosphere we breathe daily comprises of 78% Nitrogen; this equates to 7800kilograms above every hectare. There are many types of N fixing bacteria and microbes in the soil & on the plant leaf and significant focus needs to be on getting these microbes etc. to draw N from the atmosphere over the current preference of applying it synthetically. N fixing microbes require air, without air in the soil, they simply cannot fix atmospheric N. There are some trace elements required too but that is a discussion for another day.

### RESPONSIBLE, INDEPENDANT ADVICE THE KEY TO GREAT RESULTS

Like professionals in many industries, farmers often employ farm consultants or external help in the areas they are not skilled in. In many cases this has gone well, like outsourcing advice on farm systems, capital investment or staff management.

**What is commonly missing in our farm consultants, however, is a sound knowledge grounded in soil. The result of this lack of knowledge is a default 'recipe type' approach.**

Moreover, constant pushing for production goals with little understanding to the tradeoffs, a biological system or how a farms soil is functioning has led to farms becoming completely dependent on an approach that simply relies on the 'put more on' approach to nutrient management.

Farm consultants have had little responsibility for the advice that has been given, often distracted by incentives or commissions, aka. zero responsibility for the high use of things like significant N use/abuse.

3 years ago in our community, it was not uncommon to hear of Canterbury dairy farmers still using 400kg/ha of N. The focus was to maximise N use, in growing more DM. More DM intake would lead to a higher producing animal and thus milk.

**Indeed, this methodology grew more grass, but the consequences of this approach have been seen in the environmental impacts on water quality and more directly on farm in animal health.**

This philosophy over time has degraded the nature of what the cows are eating. A plant requires more than 26 minerals, if you simply only replace 2-4 of these then this will potentially lead to a degrading system, a system that includes soil, pasture, animal, milk production and so on. These co-factors, synergistic minerals and biological interactions all get compromised to some degree, yet dry matter production is propped up by the N input.

The grass will grow until the wheels truly fall off.

### THE SCIENCE OF HEALTHY SOIL

**Over applying N is one of the most detrimental cycles of death a farm can get on,** impacting N leaching, collapsed soil structure, bacterial dominated soils and very low Organic Matter (OM).

The US Department of Agriculture has researched this topic well in one of its studies showing "Per every 1kg of applied N/ha above the plants requirement burns out 100kg of carbon/ha". Organic Matter (carbon) is not only a source of energy for microbes but it is also the anion storehouse in soils due to its particles containing both negative and positive charge. In soil a negative charged site (-) binds to a positive charged site (+), so OM plays a significant role in holding onto both ammonium (NH4+) and nitrate (NO3-) in any soil. If the OM has been compromised by the overuse of N, any anion (N, S, B, Mo) that is supplied has a very limited ability to be held by the soil due to the lack of positively charged OM to stick too.



Canaan inspects the soil structure out on the farm of one of his clients. Farm health starts in the soil.

In farmer language, "the grass doesn't grow until the fert truck turns up" – frankly this wasn't the way it was designed to function.

This may be a US study but we have observed this to hold truth here too.

Healthy, functioning soil principally needs air, water, microbes and minerals. A compromise in one of these categories has the power to compromise the others and the system starts to under-perform. Without good soil structure, the soil's ability to breathe and hold water is diminished. So, treating soil as a valuable resource will always yield itself to production and the positive wellbeing of livestock.

**Soil Matters** has set up a support system to help our farmers navigate the topic of soil health, mineral use and budget. Our approach is to meet the farmer where the farmer is at. Farmers rely on trust; trust is built around expectations being met repeatedly. We do this monthly with our farmers, taking shape in the form of farm walks, digging holes, measuring plant sap, analysing herbage tests then adjusting the game plan to our findings. Soil is a dynamic living eco-system, we need to be able to read & assess what's going on to then pull the right leavers of action.

Initially this often means playing in the space the farmer is used too - basic NPKS use.

**In Canterbury significant focus was placed on N and very little around the supporting mineral & biological co-factors.**

For example, nitrogen without the co-factor sulfur cannot convert nitrate nitrogen into amino acids such as cysteine and methionine. This means the nitrate stays as "crude protein" rather than being converted into higher order compounds which are then used by the plant for growth. Potentially worse still, is crude protein has a massive energy draw on the animal to be processed by the liver and urinated out only contributing to the problematic cycle. There are many mineral and biological co-factors, the more we learn to work with them the greater the outcomes to the farmer & stock.

Farmers blame the cow for high N excretion through urine, but no one asks who fed the cow high N grass? In the dairy world of today reducing the application of N and the methodology in how that N is applied is not only a sensible farming practice, it is also good business practice in the current economic realm. What business would not want to save money yet achieve the same results whilst potentially improving other aspects of their business along the way.

*Canaan Ahu is a Director and Consultant with Soil Matters – Soil Consultants. Canaan established Agrownomics in 2013 a soil advisory company based in Central Canterbury. Recently Agrownomics merged with Soil Matters in order to increase influence & succession in serving its communities. We are passionate about soils & growing with our farmers.*

Contact Canaan on 021 029 58011 or at [www.soilmatters.co.nz](http://www.soilmatters.co.nz)

## IT'S (NOT) ALL ABOUT 'N' CONT.



**Balance:** Soil has a complex chemical makeup. Ensuring a balanced fertiliser input program that works with many of the 26 minerals found in soil is essential. This means applying what the soil needs and what the plant needs when it needs it to support its growth.

**Energy:** Soil is also a complex system of living bacteria, fungi, organic matter, and inter-related symbiotic relationships that require an energy source to operate efficiently.

**Variety:** Not all soil is the same. Different areas have different soil; indeed, different paddocks have different needs, so it is essential that each area/paddock of your farm is given the products it needs to thrive.

The importance of the three above tenets cannot be understated and it is imperative that any fertiliser program addresses these to ensure maximum benefits are gained without any negative impacts. With that in mind soil tests, foliage sap tests and the like become important directors on what each of your paddocks needs. The 'balance' is in changing what you apply to ensure each paddock has what it needs to grow healthy grass with minimal to no environmental impact.



White Clover is one of the best ways to fix Nitrogen from the atmosphere in the soil to maximise growth, and developing organic matter in poorer soils.

### VERSATILITY – FARM MACHINERY CONSOLIDATION

Achieving 'balance' as mentioned above in your farm nutrition program is critical. However, one thing that has held up the ability to achieve this 'balance' is the need for many different machines to apply many different products.

**Many farms will have their fert spreader to apply fine lime or similar products as well as a boom sprayer for liquids such as herbicides or liquid seaweeds.**

Additionally, the bulky may come in once or twice a year to apply Nitrogen or other capital fertiliser P, K and S products. Then there are the in-shed feeding systems that administer animal health products such as magnesium oxide.

With a Tow and Fert on the farm, retiring (or on-selling) the many machines used to apply different products becomes a possibility.

A Tow and Fert Multi 1200, 3-point linkage machine applying fertiliser in Gippsland, Victoria

**Versatility is one of the biggest benefits on-farm of the Tow and Fert range with all the above products being able to be applied through the Tow and Fert from one tank in one-pass.**

This saves massive amounts of time and allows farmers complete control over their nutrient input and animal health program.

So, whilst the focus for the last few years has been 'all about 'N' what we are seeing out on the many farms we visit every year is a growing innovation, efficiency, profitability, and environmental responsibility.

The "end of farming as we know it" might actually be a tip of the hat to the past and a nod to the future. If the high input 'N' based system has served its time, and it surely has, then the end of farming as we know it is no bad thing and the improvement of our systems can only lead to improvements in growing the food we need to feed the people of the world.



# WHERE'S THE SCIENCE?

## Summary of: Using Humic Compounds to Improve Efficiency of Fertiliser Nitrogen.

By Phillip Schofield<sup>1</sup>, Nicky Watt<sup>2</sup> and Max Schofield<sup>3</sup>

As the manufacturers of the Tow and Fert range of machines we are often asked "Where's the Science." This question is preloaded with the assumption that there is no science, when in fact, there is a lot of science out there that testifies to the effectiveness of foliar applied fertiliser.

This study, conducted in 2013 is a terrific example of how effective foliar applied fertiliser (in this case N) can be. In summarising this study, we will focus primarily on the comparison between foliar applied urea with humic compounds and solid (granular) applied urea with dissolvable humic compounds.

### THE TRIALS

The three trials covered in the aforementioned paper were conducted at Cloverdale Holdings a 730 Ha, 2900 cow dairy farm near Ashburton from December 2009.

Three trials were carried out over 4 years with each of the trial's treatments being applied to 6 Ha areas.

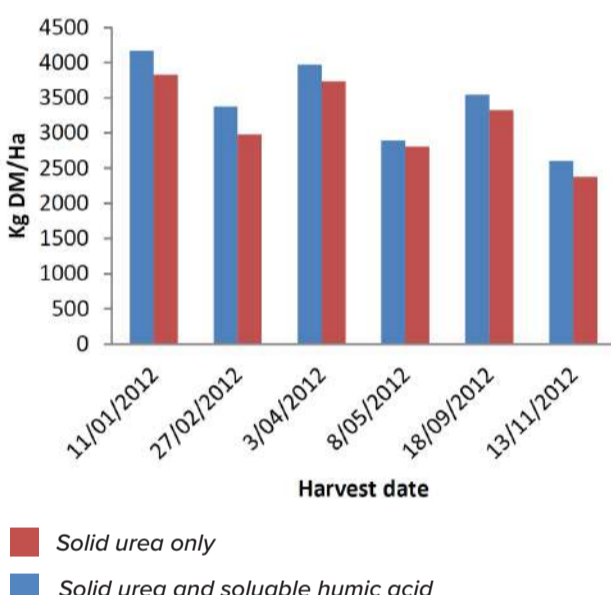
Pasture production was measured by taking pasture cuts on four 0.5 square meter replicate plots for each treatment at each harvest date.

Humic acid treatments were applied as soluble humic acid granules mixed with solid urea fertiliser before it was spread onto the paddock or as humic acid solution that was mixed with dissolved urea in the case of liquid applications.

Liquid fertiliser applications were made to pastures with covers of 1800 to 2000kg of dry matter/Ha.

#### Trial 1.

Solid (Granular urea) applied at 65Kg/Ha (30 Units of N/Ha) with and without 3kg of soluble humic acid granules/Ha.



Above: Trial 1. Using solid (Granular urea) with the addition of dissolvable humic acid resulted in more dry matter being grown at harvest on each occasion.

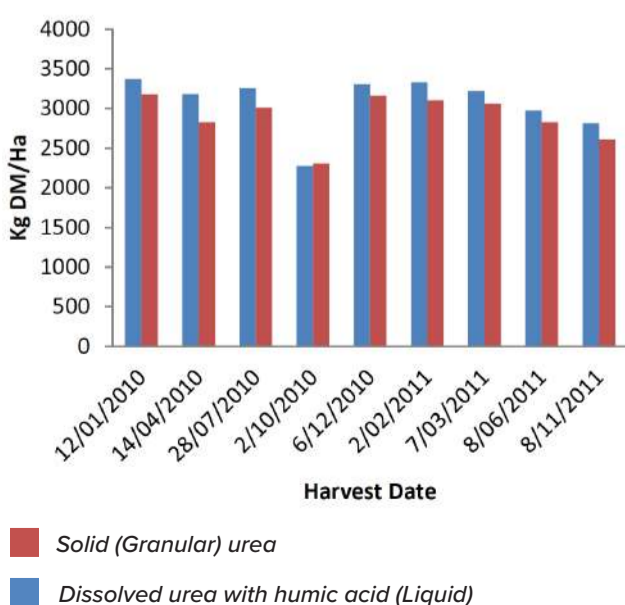
#### Results of Trial 1:

- An average 9% more dry matter was produced where humic acid granules were used.
- Total amount of extra dry matter produced where humic acid granules were used was 1,680 kg/ha.

#### Trial 2.

Solid (Granular urea) applied at 55Kg/Ha (25 Units of N/Ha) and liquid applications of dissolved urea at 20Kg/ha (9 Units of N/Ha).

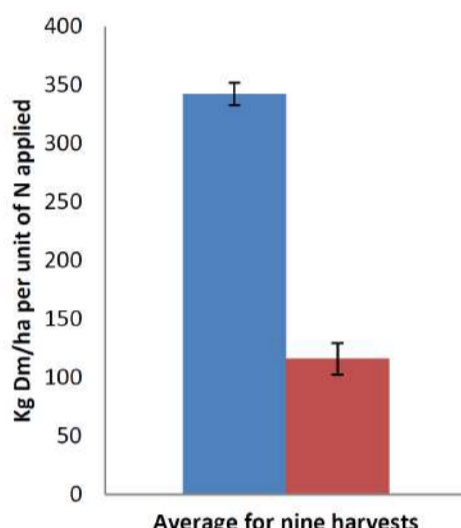
The dissolved urea had 6 litres/Ha of humic acid added to the spray mix..



■ Solid (Granular) urea  
■ Dissolved urea with humic acid (Liquid)

Bottom left: Out of 9 harvests over 2 years, 8 produced more dry matter with the dissolved urea (9 Units of N/Ha) and humic acid (Liquid) application than the lots with granular (Solid) Urea (25 Units of N/Ha) applied.

Per unit of applied nitrogen (N) it is clear that the foliar applied urea and humic acid mix produced three (3) times as much dry matter compared to applying granular urea on its own.



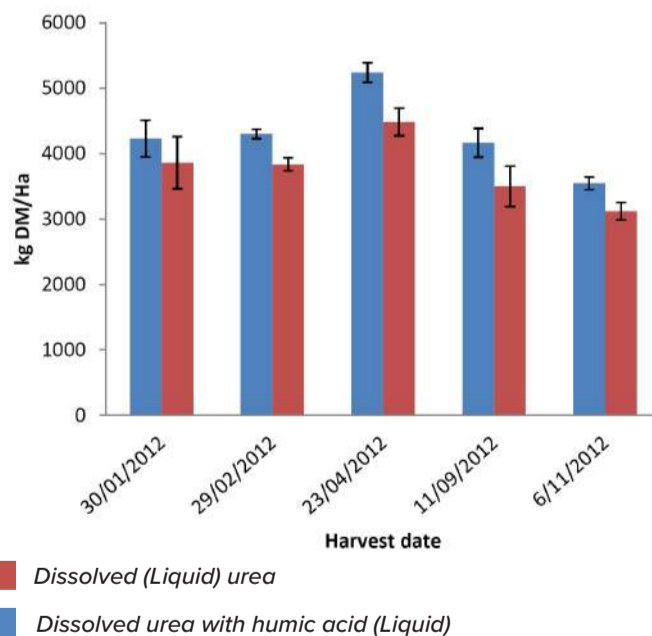
Above: Average pasture production per unit of N applied at 9 harvest dates from plots treated with dissolved urea and humic acid (Liquid) fertiliser compared to granular (Solid) urea.

#### Results of Trial 2:

- Granular (Solid) application of urea compared to dissolved (Liquid) applied urea with humic acid added resulted in more dry matter growth at 8 of 9 harvests.
- Per unit of N applied, the plots with liquid application grew three (3) times more dry matter compared to those with only granular (solid) urea application.
- The additional growth achieved with the liquid application of urea and humic acid is described as HIGHLY SIGNIFICANT by the research team.

#### Trial 3.

Dissolved (Liquid) urea applied at 20Kg/Ha (9 Units of N/Ha) as liquid applications with and without the addition of 6 L/Ha of humic acid.



Above: Pasture production from 4 of the 5 harvests in trial 3 on plots treated with liquid urea compared to those treated with liquid urea and humic acid showed an increase in dry matter growth.

The trial shows that there is a significant benefit to be derived from the addition of humic acid to liquid nitrogen of between 9% and 18% with an average of 14% more pasture dry matter grown across the trial. This represented an additional 2,681 kg DM/Ha.

#### Results of Trial 3:

- The addition of humic acid (a carbon source) to the mix resulted in an average increase in dry matter growth of 14%.

# DID you KNOW?

## #01

### 78% OF THE EARTH'S ATMOSPHERE IS NITROGEN

It seems like a ridiculous number when you consider that we breath in that atmosphere every day. But, unlike plants, we do not need nitrogen so we just breath it in and then straight back out again.

Plants cannot use atmospheric nitrogen either because they lack the enzymes and metabolic pathways to be able to turn the atmospheric nitrogen into proteins they can use to grow. This is why legumes are so important to 'N' fixation. Legumes have a symbiotic relationship with 'N' fixing bacteria that live inside specialised root nodules. The bacteria get nutrients from the plant and the plant gets 'N' compounds that help it to grow.

## #02

### FERTILISER TECHNOLOGIES ACROSS THE FERTILISER SPECTRUM ARE SAVING MONEY AND CREATING EFFICIENCIES.

Liquid 'N' is just one way that fertiliser efficiency is finding its way to market these days. Others include the application of traditional P, K, and S products as Fine Particle products (under 50 micron in size), the use of seaweeds, humates, molasses and fish fert as supplements or replacements for chemical fertilisers, and the addition of trace elements and minerals to the mix for an all-around fertiliser-reducing, money-saving, healthier input system without any drop-off in production.

### SUMMARY

The above results from the 3 trials clearly illustrate the benefit of using a carbon source, humic acid, in combination with liquid urea applications. When it comes to comparing the difference between granular (Solid) and foliar (Liquid) applications the benefits are significant with 3 times more dry matter production per unit of applied N being the outcome.

For farmers and businesses this means the following:

From the study "The use of humic compounds with dissolved urea applications will result in 14% greater pasture dry matter production than the use of dissolved urea on its own. This work has also clearly demonstrated that the use of nitrogen fertiliser as a liquid or foliar application with humic compounds included in the spray solution will result in a large increase in the amount of pasture produced per kg of nitrogen fertiliser added when compared to the use of solid urea fertiliser."

1. Significantly reduce N use (3 times less) potentially saving 10's of thousands of \$\$\$ in fertiliser cost.
2. High usage by the plant of the N applied as it is applied to the leaf of the plant and does not land on the soil.
3. Significantly reduce potential for leaching and run off.
4. Much better environmental outcomes, lower environmental impact.

#### Additional Benefits observed in the study:

1. It is likely that the chelation of urea with humic acid resulted in enhanced plant uptake and improved the ability of plants to use the N fertiliser.
2. Visual Soil Assessments show that where humic acid was applied the plants had deeper root systems and more dense roots.
3. There was a reduction in the nitrate levels in the pasture the animals ate. This benefitted animal health with reduced levels of lameness, lower empty rates and reduced somatic cell counts.

### CONCLUSIONS

Overall, the research team found that farmers can grow the same amount or more dry matter with 1/3rd the fertiliser input. The addition of humic compounds allowed for a highly efficient uptake by the plant with less leaching and run off.

View the original report here: [https://www.towardfert.co.nz/wp-content/uploads/2022/08/Paper\\_Schofield\\_2013.pdf](https://www.towardfert.co.nz/wp-content/uploads/2022/08/Paper_Schofield_2013.pdf)  
Summary completed on 10th October 2022

# AROUND THE WORLD

From Dannevirke to Ireland & Wales. By Tim Henman

## THE METALFORM TEAM JOINED OUR IRISH DISTRIBUTOR AT HOME.

Over the past 5 years, we have been actively working with our partner and distributor FuturAg in Ireland and Wales, to understand the similarities between the New Zealand pasture and grazing system.

The most obvious assessment in all markets, is that grass production is still the cheapest form of feed and still the most efficient way to deliver the multiple nutrients an animal needs to remain healthy and productive.

In an ever changing world with an increasing population and more and more restrictions on farmers – the need to grow grass in the most efficient method is just so important.

Tow and Fert Sales Manager Michael Smith and myself have just spent a couple of weeks in Ireland and Wales, visiting our customers and exhibiting for the first time at the Irish National Plough. The purpose of our trip was to support our customers and learn of any differences between grazing and silage production and growth and how the Tow and Fert can support these farmers further.

During the visit we observed similar challenges to those seen in New Zealand with increasing operating costs across the board including very high fertiliser prices. Additional to this, farmers over there face legislation around a 'close period' for application of synthetic fertilisers. This 'close period' is a period of time where chemical fertilisers are not permitted to be used at all. This adds additional layers of complexity for growing sustainable feed throughout the year. The reality is that the Tow and Fert machines are having a major part to play in this market with the application of dissolved urea during the spring/summer and then complimented with other non-conventional products throughout the 4 month 'close period' during winter.



Above: The Tow and Fert stand and The National Plough, Europe's largest agricultural event with over 277,000 visitors over just 3 days.

### THE NATIONAL PLOUGH

Europe's largest outdoor event, returned to Ireland this year after its absence in the last couple of years. The show hosted in Ratheniska, Co. Laois attracted **277,000** visitors and had over 1,700 exhibitors.

Tow and Fert exhibited for the first time and was also accepted to exhibit into the Innovation section of the show. Having 2 sites on the show meant we had a busy 3 days with a full sales team there from Ireland and New Zealand.

It was refreshing to hear the Locals discuss their understanding of the foliar fertiliser system, and in most cases had either tried it themselves or knew someone doing it via systems that were not scalable or fit for purpose. Tow and Fert has hit Ireland at the right time with all of the visitors to the field day acknowledging its value add and ROI down on the farm.



Above: Out on farm in Ireland Tow and Fert users are seeing very similar benefits to those in New Zealand. The cost of Urea over there is significantly higher than in New Zealand.

### EXISTING CUSTOMERS FARM VISITS

During the periods of restricted travel in 2021 and 2022, we have delivered Tow and Fert across Ireland and Wales so we took the time to visit a handful of these farmers to hear of their stories and journey to date.

Without exception, all customers have been focussed on the reduction of N (Nitrogen) which is a great place to start for the ROI. The opportunity that we discussed with them was the ability to test the soil and herbage more frequently, and add other macro and micro nutrients in the brew to correct imbalances in the plant and/or soil. This includes the application of N, P, K and S all as a foliar plus the addition of humates, seeds, fish hydrolysate and seaweed products etc.

We look forward to working closely with the Irish, Welsh, Scottish and English in the future – and most of all welcome their feedback and learnings.

## EMISSIONS FRUSTRATION! cont from front page.

▶ *Biogenic gases such as methane, will now be treated differently to fossil fuel greenhouse gases due to their behaving differently in the atmosphere."*

With the report coming back to government after its consultation with industry, He Waka Eke Noa is doing what it set out to do back when Agricultural emissions were first excluded from the ETS: to come up with a fair scheme that means agricultural methane polluters (ruminant animal farmers) be asked to pay for their share of Greenhouse Gas Emissions similar to those emitting carbon-based fossil fuel emissions.

Farmers have been left out of the ETS by design for over 20 years ie. so far, their emissions have cost them nothing. HWEN puts a system of payments and incentives around the production of methane on a farm. Payments for polluting farms will cost money, those farms that choose to work and innovate to sequester carbon whilst reducing methane emissions are incentivised thereby reducing their levy required to be paid.

### LOW EMISSIONS NOT NO EMISSIONS

It is important to remember that in reporting back to government HWEN has provided a system that it recommends being fair and reasonable. Moreover, the move to a low emission farming economy has a massive potential upside. As the world warms consumers are increasingly wanting to see that the products they purchase are having a positive impact on the planet and the environment. The Agribusiness Economic Research Unit has studied the qualities that consumers use when deciding whether to purchase a product beyond freshness, taste and texture and found that Environmental Management ranks as high as any other measure. In other words, consumers will pay a premium for products they know come from an economy that focuses on strong environmental management.

We currently gain a premium based on our reputation, however this will not last forever without tangible action to improve what we are already doing. To maintain said reputation there must be

action taken to ensure we can maximise the upside of positive environmental management and methane emissions.

The political posturing we see in the media now looks a lot like playing politics. HWEN was a partnership with industry in the primary sector with many of the parties to it having input and consultation. So, whilst its timing might make it more difficult to stomach; inflation, higher prices, economic uncertainty etc; HWEN's outcome is not unexpected; nor is it perfect.

HWEN puts in place a framework to enable farmers to transition to a low emissions economy, one where products are valued highly by consumers. Clearly the system HWEN has delivered back to government is far from perfect and needs further work. What we cannot afford to lose is New Zealand's hard-won reputation for premium quality products, as this will have far greater long-term consequences for our farmers than HWEN ever will.

## The Tow and Fert Range.



MULTI 500



MULTI 1000



MULTI 1200



MULTI 2800



MULTI 4000

For more information or to **BOOK A FREE on-farm DEMONSTRATION**  
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