

**DONAGHYS**

**LessN**

Nitrogen utilisation enhancer

# Learning the 'LessN'

Donaghys LessN® monthly update

AUGUST 2010



Welcome to the first edition of Learning the 'LessN' your monthly update on all things to do with Donaghys LessN®.

While I have only been on board with Donaghys for about four months, I have been extremely impressed with the amount of research that has gone into the development and trialling of Donaghys LessN. In my time as a pasture agronomist over the past 12 years, I have never seen a product trialled as thoroughly and extensively as LessN has been. This past and on-going research enables all LessN users to have the utmost confidence in its ability and what it can provide for your farm. The Donaghys Scientific Research Group will continue to trial LessN on pasture and other agricultural crops to ensure that farmers' continue to gain the greatest benefits from using LessN. All the best for the month ahead.

*Nigel Johnston, Biotechnology Manager, Donaghys Industries.*

## Donaghys LessN® - Farmer of the month



**Gary and Sandra Fredrickson**

**Manaia, South Taranaki.**

**143ha, 460 cows**

Gary and Sandra have been using LessN for a year now, and the product has installed itself as an integral part of their farming program.

Before LessN they were spreading Urea at 220 units of N per ha and have dropped this down to 96 units of N by switching to LessN. Further to this they were down only 3.8% milk solids opposed to the

district being down 8-9%, something they and farm owners Parininihi ki Waitotara Incorporation are naturally excited about. Their cow health is excellent which has been highlighted by the exceptional quality of pasture LessN has produced, in particular they have been impressed with the clover cover, it is extremely vigorous with big leaf.

This year has highlighted the fact that whilst experiencing a tricky season they have more tools in the tool box, for example applying nitrogen with small amounts of rain and in conjunction with GibbSTART (Gibberellic Acid). LessN is allowing them to apply Urea together with

GibbSTART which is giving them a good early response.

They have used the LessN system on both turnips and new grass with phenomenal results as well as adding thistle spray eliminating the need to cover the ground twice.

Gary and Sandra have seen the results for themselves now and are really comfortable with where LessN fits. It enables them to go into longer rounds and works well with their pasture management system. LessN gives them all the benefits - healthy soil and pastures, with no drop in dry matter production.

## Research Update -

### Newcastle University (UK) trial validates NZ trials

As part of Donaghys on going research into LessN for both New Zealand and international markets, Donaghys recently commissioned Newcastle University (UK) to conduct a pasture based trial on Donaghys LessN®. The result of this trial showed similar results to those of the New Zealand trials with LessN having a significant affect on pasture growth.

The UK University replicated trial showed a significant advantage of up to 500kg of dry matter per hectare of pasture

from the application of LessN and urea, compared to urea treatments alone. The UK trial was conducted on fertile ground (similar to that found on New Zealand dairy farms) and ran for the normal course of a nitrogen response trial.

The trial was overseen by Dr Alan Younger who concluded in his trial report that "Throughout the experiment, the effect of LessN was positive, increasing N uptake and DM yield."

This successful research is a brilliant start to Donaghys move into exporting LessN internationally, and further validates the success New Zealand farmers are having with this technology.

	Urea Rate (Kg/Ha)		
	0	40	80
No Less-N	2466	3031	3835
With Less-N	3264	3272	4333

*498Kgs extra DM grown/Ha with LessN over 6 week trial period*



## Donaghys LessN<sup>®</sup> - News Update

### Donaghys LessN<sup>®</sup> a key tool to reduce impact of ETS

With the introduction of the Emission Trading Scheme (ETS) by the government at the beginning of last month the agricultural sector will soon face the costs of greenhouse gas emissions.

Over time, the government expects to see changes in the amount of land used for agriculture relative to other uses such as forestry, and in the type and intensity of agricultural operations. It also expects to see improvements in farming efficiency, increased tree planting, more efficient use of

nitrogen fertiliser, and more effective management of animal waste.

It is in the improved farming efficiency and more efficient use of nitrogen fertiliser where Donaghys LessN<sup>®</sup> has a huge role to play. By adopting the Donaghys LessN<sup>®</sup> System the amount of urea used on a farm is halved, automatically enabling more efficient use of nitrogen fertiliser.

As well as halving nitrogen use, the use of Donaghys LessN<sup>®</sup> enhances farming efficiency through increased dry matter

production which can be achieved with lower nitrogen and fossil fuel inputs.

Based on the Lincoln University carbon emissions calculator, the Donaghys LessN<sup>®</sup> System can also reduce the carbon foot-print of an average New Zealand pasture based dairy farm by 10-15%.

By adopting the Donaghys LessN<sup>®</sup> System some farms may deliver all the carbon savings required of them by the ETS.

### Huge interest in LessN at National Fielddays

The Donaghys fielddays team were rushed off their feet at the National Fielddays at Mystery Creek with enquiries on LessN. Donaghys Sales Manager Hunter Darry reported that the interest shown in LessN this year was significantly higher than in previous years and attributed this to feedback from satisfied LessN users. "We had a lot of enquiries from farmers saying that they had heard about LessN from their neighbours and therefore wanted to know more about it" reported Hunter. "Most farmers asked questions regarding how LessN was applied, and all were pleasantly surprised at how easy the LessN system was to adopt".

Another feature at the fielddays which was invaluable was the attendance of Taranaki dairy farmer Gary Fredrickson (featured Farmer of the month) who was on site to give a 'hands on' perspective on the use and benefits of LessN. As one of many farmers who have successfully adopted the LessN system, other farmers were keen to hear directly from Gary his experiences of LessN and how it has helped his farming operation.



*A Donaghys LessN Mixing Station which formed part of the LessN display at this years National Fielddays at Mystery Creek*



## Be on the look out for Nitrate poisoning

Several cases of nitrate poisoning in livestock have been reported recently and farmers should be on the lookout for any signs of this 'hidden killer'.

Nitrate poisoning occurs when stock graze plants that have high levels of nitrate in the leaf. Under some conditions, nitrate uptake from the soil exceeds the capacity of the nitrate conversion process in the roots. This leads to elevated levels of nitrate in the plant leaves and potentially in turn nitrate poisoning. The ingested nitrate converts to nitrite in the rumen and

this enters the blood stream. Nitrite in the blood stream greatly reduces its oxygen carrying capacity and can lead to the animal dying.

Conditions likely to lead to high nitrate levels in plants include - just after an extended dry spell, overcast, moist conditions with warm soil temperatures, new grasses or greenfeed crops in cultivated ground, particularly after a dry spell and the high use of solid nitrogen fertilisers.

One benefit from adopting the Donaghys LessN® System is that the

chance of nitrate poisoning occurring when nitrogen fertiliser is applied is overcome. That is because when urea is foliar applied under the LessN System, the urea turns directly into Ammonium and then Amino Acids, skipping the Nitrate and Nitrite phases altogether. Not only does this mean the chance of Nitrate poisoning is reduced, the plant energy required to convert the urea into ammonium is significantly reduced, enabling more energy to be directed into plant growth.

## Donaghys LessN® - Tip of the month

### Keep an eye on those soil temperatures

With cold temperatures still currently being experienced across the country care should be taken to avoid applications of urea where soil temperatures are too low. To get an economic response to nitrogen fertilisers, soil temperatures should be above 10°C when taken at 9.00am at a depth of 5-7cm. If soil

temperatures are below this, it is unlikely adequate responses to urea and LessN will be achieved.

To prepare for the spring ahead, monitoring of the soil temperature over the upcoming weeks is important so that applications of LessN and Urea can be made as soon as the conditions are suitable.



## Donaghys Territory Manager of the Month

### 60 seconds with Tim (Tasman Tim) Rogers

#### *Territory you cover for Donaghys?*

Morrinsville, Te Aroha, Matamata, Putaruru, Tokoroa

#### *How long have you worked for Donaghys*

3½ years (was with Tasman chemicals for 18 years prior to joining Donaghys)

#### *Favourite part of the job?*

Visiting and meeting farmers and helping them with their operations.

#### *Interests outside of work?*

Horse Racing, Rugby, Swimming.

#### *Greatest achievement outside work?*

Breeding and owning a racehorse winner

#### *Dream job?*

I have only ever been a farmer or done this job and I wouldn't want to do anything else.

#### *If you could change one thing about the New Zealand agricultural industry what would it be?*

That every farmer in NZ used LessN to reduce the amount of nitrogen going into our water ways.



## Other news from Donaghys - Donaghys Performance Promise

Donaghys has recently introduced a full purchase price refund in the unlikely event that a Donaghys product fails to deliver the outcomes promised by our product literature.

This performance promise is just another way for Donaghys to show how serious we are about our customers' bottom line, and the success of the New Zealand agriculture industry.

As seen in the latest Dairy Range and LessN brochure, Donaghys Managing Director Jeremy Silva is at the forefront of the Donaghys Performance Promise.



*Jeremy Silva  
Donaghys Managing Director and  
Farmer*

## New Silage Wrap

### More metres per roll, More bales per roll, More value

This season will see the introduction of two new and innovative products into Donaghys silage wrap range. These new products, Professional 2000 and EcoPlus are manufactured by using the ultimate in 5 layer extrusion technology and unique specialist material blends. This combination allows a decrease in film thickness while maintaining the high technical standards required for trouble free bale wrapping.

Professional 2000 is specifically designed for round bale wrapping and its key advantage is that it is produced in as a 2000 metre roll, 33% longer than

standard 1500 metre rolls. The results of this is higher efficiency from less machine stops and roll changes, less plastic film waste and better value for money. The flexibility of Professional 2000 ensures optimal adaptation of the film to the bale preventing air being trapped within the film and the sealing between the layers is extremely good ensuring perfect air tightness.

EcoPlus is a cost effective solution for all types of big bale silage. Being a 1650 metre roll means that EcoPlus is 10% longer than standard films and will result in 10% more bales per roll. This

gives an excellent cost benefit ratio with more film reserve on board and less roll changes and machine stops. EcoPlus is suitable for all square and round bale wrapping applications.

For both products a minimum of 6 layers on the bale is recommended to ensure optimal silage quality. Scientific studies have shown that the silage quality of bales wrapped with reduced gauge films is the same as that of bales wrapped with traditional 25 micron films so you can use these products with confidence.



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