



dairy shed

ACIDS 6 **ALKALIS** 7 **GENERAL CHEMICALS** 7 **TEAT CARE** 8-9 **ACCESSORIES** 20 **DAIRY MARKERS** 21 **DAIRY RUBBERWARE** 22 23 **DAIRY ROPES**

mineral supplements

LIQUID MINERALS 10-11
POWDERED MINERALS 12-13
MINERAL CONCENTRATES 14

animal health

BLOAT & SODIUM MONENSIN 15
RUMEN CONDITIONERS 16- 17
DRENCH 18- 19
DRENCH GUNS 20

crop protection

HERBICIDES 24- 27
SURFACTANTS 28
FUNGICIDES 28
PLANT GROWTH PROMOTERS 29

N-Boost®

N-*BOOST*[®] 30 - 42

contact us

TERRITORY MANAGER AREA MAP 43

proudly NZ owned and still manufacturing in Dunedin, Donaghys has been supplying the rural sector for over 140 years. Just as farming practices have

changed over the years so

has Donaghys.







innovation

FORTHE LAST 15 YEARS DONAGHYS

has worked to expand our range, providing quality and innovative products to meet the ever-changing needs of our customers.

Over the last 10 years Donaghys have lodged 18 patents:

- Two in Rope & Cordage
- Five in Pasture and Agchem
- Four in Teat Care (Mastitis control)
- Two in Dairy Hygiene
- Five in Animal Health (Anthelmintics, minerals and rumen conditioners)

managing success today, taking initiatives for tomorrow



our people

DONAGHYS BELIEVES IN HAVING an energetic, enthusiastic and accountable team from diverse backgrounds who seize opportunities and approach challenges with vigour and commitment.

THIS GIVES US A DISTINCT advantage in applying the 'thinking' necessary to finding better ways of doing things and then making them happen. The aim is to use initiative to improve efficiencies and levels of customer service.

WE ARE PROUD to have many longterm industry skilled staff as part of our team. This focus on staff is paramount to our ongoing success.



WE HAVE BEEN MANUFACTURING on the same site in South Dunedin since 1878. While the factory has changed from an industrial rope and twine plant to a GMP approved animal health factory we have always been proud to continue to manufacture in New Zealand.



expertise

INTHE FIELD

Our team of territory managers provide expertise to get the best of the products we offer.

Agrecovery

DONAGHYS ARE A MEMBER of Agrecovery, Rural Recycling System. This product stewardship scheme is one where brand owners that distribute agrichemical, animal health and dairy hygiene products into the New Zealand market take responsibility for the disposal of these products and their packaging at the end of their useful life.

We do this by paying the Agrecovery Foundation fees and levies to cover programme costs. This enables free access to programme users.

Plastic containers and drums from 1 to 1,000 litres can be dropped off or collected for recycling. See agrecovery.co.nz or freephone 0800 247 326 for more details.









PureFlush WORLD FIRST TECHNOLOGY

DAIRY ACID DETERGENT/SANITISER

PureFlush is a unique, new generation dairy acid sanitiser formulated specifically for cleaning and sanitising stainless steel, plant and equipment including rubber surfaces in the dairy shed.

PureFlush contains powerful dual acting active ingredients in high concentrations.

PureFlush is derived only from ingredients that are found naturally occurring in milk common residues sometimes found when using some other dairy acid products cannot occur when using PureFlush.

PUREFLUSH BENEFITS

- · Powerful, highly effective dairy acid sanitiser
- 45% mixed organic (Lactic & Citric) acids
- Zero Quaternary Ammonium Compounds (QAC)
- Surfactants and sanitisers are developed from ingredients naturally found in milk
- Common residues sometimes found when using other acids cannot occur when using Pureflush
- On farm trials found Pureflush to be suitable in all water types and dairy shed systems



Thermoflush

DAIRY ACID DETERGENT/SANITISER



A superior acid with an in-built sanitiser used for the removal of milkstones in milking machine plants.

USE RATE	1.5mL/Litre water
SIZE	200 Litres

- Dynamic formula 630g/L Phosphoric Acid and 44g/L Glycolic Acid
- Number one in hard water areas
- Unique sanitising system
- Non-foaming
- Will dissolve iron-oxide more effectively than other phosphoric/ sulphuric blends

G2 DAIRY ACID DETERGENT/SANITISER



An excellent cost effective acid for cleaning stainless steel dairy farm plant and equipment.

NZFSA approved for use in farm dairies and suitable for hot or cold water

USE RATE	1.5mL/Litre water	
SIZE	200 Litres	

- High strength acid cleaner
- 170g/L of Phosphoric Acid and 114g/L of Sulphuric Acid
- Effective in good quality water
- Pre-mixed low foam formula

ALKALIS I FOR REMOVAL OF PROTEIN AND FAT

Circomate

POWDER ALKALI DETERGENT



A heavy-duty chlorinated alkaline detergent formulated to clean stainless steel and rubber surfaces exposed to milk.

USE RATE	1.5-2g/Litre water
SIZE	20 kg

high strength chlorinated alkali detergent- 600g/kg Sodium oxide and 25g/kg Sodium Dichloroisocyanurate stable chlorine content

- Suitable for modern high turbulence wash systems
- Very low foaming

Hypo

- For use as a cleaner in plant and bulk milk tanks
- · Excellent economical bomb-wash

LIQUID CLEANER/SANITISER

Protosolv

LIQUID ALKALI DETERGENT



A low foaming liquid dairy detergent specifically formulated for the removal of fats and protein deposits in milking plants.

USE RATE	2mL/Litre water		
SIZE	20 Litres	100 Litres	
200 Litres			

- High strength chlorinated alkali detergent- 400g/L Sodium Hydroxide and 33g/L Sodium Hypochlorite
- Low foaming and free rinsing
- Excellent soil penetration
- Superior protein and fat removal
- For use as a cleaner in plant and bulk milk tanks

GENERAL CHEMICALS

DAIRY ACID DETERGENT/SANITISER



Powerflush

PureFlush

An acid sanitiser formulated to clean and sanitise stainless steel and rubber surfaces.

- Strong formulation 210g/L Phosphoric Acid and 120g/L Sulphuric Acid
- Contains new generation of polymeric sanitiser
- Very low foaming

USE RATE	1.5mL/Litre	water
SIZE	20 Litres	200 Litres
1,000 Litres		

- Biodegradable and not susceptible to microbial resistance

Suitable for general cleaning in the dairy shed and water treatment.

USE RATE	1.3 to 1.9 mix	c ratio	
SIZE	20 Litres	100) Litres
200 Litres			

- High strength 13% Sodium Hypochlorite
- Excellent concrete cleaner
- Economical in use (mix 1:3 with cold water)
- Removes dairy soil from walls, floors and pipe-work
- May be used as a booster when mixed with alkali wash through the plant and bulk milk tank
- Superb in breaking down protein deposits
- For use in water treatment including chlorination of swimming pools



UdderMAX

DOUBLE ACTIVE TEAT SPRAY

TEATSPRAY

World first technology in teat care using Lactic acid in combination with iodine.

This smart lactate system drops the pH, kills microbes and preserves the iodine for application to the skin.

Lactic acid removes soil to maximise iodine performance and also removes dead skin cells, assisting in the healing of the cow's teat.

USE RATE	1:4 to 1:9 mix ratio		
SIZE	20 Litres	200 Litres	
1,000 Litres			

UDDERMAX BENEFITS

- Provides farmers a highly effective low-cost iodine-based teat spray without compromising on quality.
- Highly effective bacteria kill due to double active ingredients - 10g/L lodine and 100g/L Lactic Acid.
- Also contains an emollient system rejuvenating and healing the skin (a total of 220 g/L which includes 120g/L of Glycerine).
- · The alcohol ethoxylated form of iodine means less staining, less corrosiveness and less iodine impurities
- UdderMAX has a lower viscosity than other iodine products allowing easier mixing
- UdderMAX has 0.2% iodine content in the diluted spray when used at the 1:4 mix ratio.
- It is effective in all water types, hard or soft.

TEAT SPRAY EFFICACY TRIAL 17 APRIL 2015 | Results of the trial can be seen in the table below.

					00.10 0. 1		
Escherichia coli	Contact time	Count before contact	LOG10	Count after contact	LOG10	LOG10 decrease	% Decrease
Teat Spray Batch	10 minutes	84,000,000	7.92	<100	<2	>5.92	99.999
2015/04/167	30 minutes	84,000,000	7.92	<100	<2	>5.92	99.999
Staphylococcus aureus	Contact time	Count before contact	LOG10	Count after contact	LOG10	LOG10 decrease	% Decrease
Teat Spray Batch	10 minutes	46,000,000	7.66	<100	<2	>5.66	99.999
2015/04/167	30 minutes	46,000,000	7.66	<100	<2	>5.66	99.999
Streptococcus uberis	Contact time	Count before contact	LOG10	Count after contact	LOG10	LOG10 decrease	% Decrease
Teat Spray Batch	10 minutes	17,000,000	7.23	<100	<2	>5.23	99.999
2015/04/167	30 minutes	17,000,000	7.23	<100	<2	>5.23	99.999
Streptococcus agalactiae	Contact time	Count before contact	LOG10	Count after contact	LOG10	LOG10 decrease	% Decrease
Teat Spray Batch	10 minutes	22,000,000	7.34	<100	<2	>5.34	99.999
2015/04/167	30 minutes	22,000,000	7.34	<100	<2	>5.35	99.999
Corynebacterium bovis	Contact time	Count before contact	LOG10	Count after contact	LOG10	LOG10 decrease	% Decrease
Teat Spray Batch	10 minutes	3,000,000	6.48	<100	<2	>4.48	99.997
2015/04/167	30 minutes	3,000,000	6.48	<100	<2	>4.48	99.997

ADVANTAGES OF LACTATE SYSTEM

- It enhances the property of iodine increasing its efficacy
- · Acts as an emollient improving skin healing
- Assists in removing soil to maximise iodine performance
- Removes dead skin cells to assist in the healing
- Diluted, the lactate system drops the pH, kills microbes and due to this, preserves the iodine for actual application to the skin.
- Having some antimicrobial properties in the lactic acid/ lactate system, UdderMAX takes "first action" in killing microbes allowing iodine to be active for a longer time
- It also stabilises iodine to prevent loss/ evaporation on storage or when used

Uddercontrol **TEATSPRAY**



Chlorhexidine based teat sanitiser for use in the control of mastitis in dairy cattle and as an aid in the control of teat cracking and chapping.

USE RATE	1:4 mix ratio	
SIZE	20 Litres	200 Litres
1,000 Litres		

- · Active ingredient 22.5 g/L Chlorhexidine Digluconate
- . Contains 300q/L of Glycerine
- Contains new generation surfactant to improve the active ingredients' penetration through the skin/teat
- · Contains additional disinfecting agent (ethanol) to provide disinfecting properties without irritating skin

Registered Pursuant to the ACVM Act 1997 No. A010762.

Uddermate TEATSPRAY



Chlorhexidine based teat sanitiser designed to kill mastitis causing bacteria in dairy cattle while maintaining teat condition.

USE RATE 1:9 mix ratio				
SIZE	200 Litres	1,000 Litres		

- Active ingredient 44g/L Chlorhexidine Digluconate
- Contains 230g/L Glycerine to maintain teat skin condition
- 1:9 use rate will provide excellent kill of bacteria

Registered Pursuant to the ACVM ACT 1997 No. A006974.

Emolan

TEAT CONDITIONER



Emollient formulated teat conditioner for use as an additive in teat dip and spray solutions specifically designed for cow teats.

SIZE	20 Litres	100 Litres
200 Litres	1,000 Litres	

- · Contains blend of superior cosmetic grade emollients
- · Contains ethoxylated lanolin
- · Suitable for adding to all teatsprays
- Use to replace up to 20% of water

Registered Pursuant to the ACVM ACT 1997 No. A010833.

Glycerine

TEAT CONDITIONER



For use as an Emollient and skin conditioner.

USE RATE	1.5mL/Litre water		
SIZE	20 Litres	100 Litres	

- Contains glycerine emollients
- Suitable for adding to all teatsprays
- Use to replace up to 20% of water

Registered Pursuant to the ACVM ACT 1997 No. A011370.

mineral supplements



DairyMin® 5 Chelate

A balanced blend of the 5 major trace minerals required by dairy cows in New Zealand.

- Ensures optimum health, immunity, fertility and productivity
- Counteracts poor mineral absorption
- Minerals are supplied as organically bound chelates (with the exception of Selenium)
- Effective supplementation in the face of chemical antagonism from minerals otherwise available to the cow.
- Liquid form allows easy and accurate application through a torpedo dispenser or inline dispenser system

SIZE				
20 Litres	100 Litres	I	200 Litres	
1,000 Litres				

TRACE ELEMENT LEVELS (PER 4ML DAILY DOSE)		
Copper Chelate	200mg	
Cobalt Chelate	2mg	
Selenium (Sodium Selenate)	5mg	
lodine Chelate	10mg	
Zinc Chelate	100mg	

DOSE RATES (see container label for full information)	PER DAY	
From 1 month before calving to mating	4mL/head	
Post mating through lactation 2mL/head*		
* Use blood/liver results or veterinary advice to confirm		



BENEFITS OF CHELATED MINERALS

- Chelated minerals are where a mineral is bound to an amino acid to increase bioavailability
- Smaller amounts of chelated minerals are needed to meet nutritional needs due to superior absorption.
- There is less interaction with other minerals with chelated minerals further improving bioavailability
- · Scientifically and clinically proven to be safe, predictable, and effective.
- · Soluble and stable in acidic environments.

Our Chelated custom blends are now actively stocked items.

AND THE SHAPE WAY TO



SIZE	200 Litres
1,000 Litre	es available on request

Southland Chelate Custom Blend

A five mineral custom blend with reduced copper and increased selenium to suit Southland farming systems, based on veterinary advice.

TRACE ELEMENT	mg per mL	5mL dose
Zinc	50	250
Copper	20	100
lodine	1.6	8
Cobalt	2	10
Selenium	3	15

DairyMin® 5 Chelate Custom Blend

Provides a balanced blend of 5 essential trace elements that are important to ensure optimum health, immunity, fertility and productivity can be achieved.

Trace element levels are the same as DairyMin 5 Chelate apart from Selenium which has been doubled to a 10mg daily dose.

SIZE 200 Litres | 1,000 Litres

Donaghys recommend regular testing of blood and liver samples in conjunction with veterinary advice to confirm optimum mineral levels are supplied. (Many factors can cause differences in required mineral levels). In areas with specific mineral shortages, additional supplementation may be required.

LIQUID MINERALS

Chir Filler (Chiadas Chir Filler (Chiadas Mental

DairyMin® 4 Chelate

A liquid mineral supplement for dairy cows from pre-calving through lactation.

- Provides a balanced blend of 4 essential trace elements that are important to ensure optimum health, immunity, fertility and productivity can be achieved
- Minerals are supplied as organically bound chelates (with the exception of Selenium)

Ready to use liquid formulation

 Contains no copper- ideal in situations where cows are getting sufficient copper from PKE and/or other sources

DOSE RATES (see container label for full information)	PER DAY
From 1 month before calving to mating	2.5mL/head
Post mating through lactation	1.25mL/head*

	TRACE ELEMENT LEVELS (PI	ER 2.5ML DAILY DOSE)
	Cobalt Chelate	2mg
-	Zinc Chelate	100mg
	Iodine* Chelate	5mg
	Selenium	5mg
	* Organic Indine (EDDI)	

* Use blood/liver results or veterinary advice to confirm use of half rate.

DairyMin® 8

200 Litres

A premium liquid mineral supplement in a probiotic extract base for dairy cows from pre-calving through mating and lactation. DairyMin® 8 ensures that adequate levels of trace elements are supplemented to enable cows to achieve higher levels of performance.

- Ensures optimum health, immunity, fertility and productivity
- Provides a balanced blend of essential trace elements for dairy cows
- Probiotic extract base (15%) provides high levels of amino acids and organic carrier compounds which assist mineral absorption

•	Avoids	potential	antagonisms	that reduc
	uptake	of particu	ular minerals	

 Liquid form allows easy and accurate application through a torpedo dispenser or inline dispenser system

DOSE RATES (see container label for full information)	PER DAY	
From 1 month before calving to mating	15mL/head	
Post mating through lactation 7.5mL/head*		
* Use blood/liver results or veterinary advice to confirm use		

TRACE ELEMENT LEVELS (PER 15ML DAILY DOSE)			
Copper	140mg	Manganese	80mg
Cobalt	6mg	Chromium	3.5mg
Selenium	5mg	Boron	3mg
lodine	10mg	Probiotic	15%
Zinc	440mg		



200 Litres | 1,000 Litres



SIZE 200 Litres | 1,000 Litres

DairyMin® 3

A liquid mineral supplement containing 3 essential trace elements - Copper, Selenium and Cobalt.

- Formulated to provide a balanced blend of the three most common production limiting trace elements
- Concentrated formulation means low volume daily dose (4ml)
- Helps to ensure productivity, fertility and health are not compromised
- Liquid form allows easy measurement and application through an inline dispenser system or through a torpedo dispenser

DOSE RATES (see container label for full information)	PER DAY
From 1 month before calving to mating	4mL/head
Post mating through lactation	2mL/head*

* Use blood/liver results or veterinary advice to confirm use of half rate.

TRACE ELEMENT LEVELS (PER 4ML DAILY DOSE)		
Copper	200mg	
Selenium	5mg	
Cobalt	6mg	

DONAGHYSREFERENCE SIDET

mineral supplements **POWDERED MINERALS**



25 X 1kg Sachets

25kg Bulk Bag

DairyMin[®] 5

A powdered mineral supplement containing 5 essential trace elements formulated for dairy cows to promote health and production.

- . Ensures optimum health, immunity, fertility and productivity
- · High quality, cost effective mineral supplement product
- · Easy to use and store

AVAILABLE IN 25 X 1KG SACHETS. OR BULK 25KG BAGS

- Pre-measured sachets (25 x 1kg sachets per bag) allow easy measurement and application through an inline dispenser system or a torpedo system
- Sachets remove the normal handling and dust concerns of bulk powder trace element mixes, and the minerals remain protected from moisture and humidity even after the outer polyprop bag is opened
- Also available in 25kg bulk bags (a measuring jug can be provided on request to make up herd's daily requirement)

TRACE ELEMENT LEVELS	(PER 2.5G DAILY DOSE)
Copper	200mg
Cobalt	6mg
Selenium	5mg
lodine	10mg
Zinc	500mg

DOSE RATES (see container label for full information)	PER DAY
From 1 month before calving to mating	2.5g/head
Post mating through lactation	1.25g/head*
* Use blood/liver results or veterinary advice to confirm use of	

DairyMin® Custom Mix



25kg Bulk Bag



25 X 1kg Sachets

Available in a blend to suit your individual needs.

Some herds may require higher or lower levels of certain minerals such as Selenium and Copper at different times.

If variations to Donaghys standard range of powdered minerals are required, Donaghys can offer a custom blend service to suit farmers' specific needs.

Contact your local Donaghys Territory Manager for further information.

DairyMin® 4 A powdered mineral supplement containing 4 essential trace

elements formulated for dairy cows

to promote health and production. Seek veterinary advice if using in addition to any

other supplemental forms of Selenium.

SIZE

25kg Bulk Bag

- Provides safe, balanced levels of Selenium, Cobalt, Iodine and Zinc
- Does not contain Copper, making it suitable for farmers supplementing with PKE
- Available in convenient 25kg bulk bag
- 5mg of Selenium per 2.5g dose

TRACE ELEMENT LEVELS	(PER 2.5G DAILY DOSE)
Selenium	5mg
Cobalt	6mg
lodine	10mg
Zinc	500mg

DOSE RATES (see container label for full information)	
From 1 month before calving to mating	2.5g/head
Post mating through lactation 1.25g/head*	
* Use blood/liver results or veterinary advice to confirm use of half rate.	

Donaghys recommend regular testing of blood and liver samples in conjunction with veterinary advice to confirm optimum mineral levels are supplied. (Many factors can cause differences in required mineral levels). In areas with specific mineral shortages, additional supplementation may be required.



An animal remedy loose salt lick used to assist with the supplementation of trace element deficiencies in dairy cows.

- Magnesium boosted for use with both dairy cows and beef cattle
- Supplies probiotic extracts and other natural digestion enhancers
- Supplies macro and trace elements necessary for production, fertility and good health
- Allow free access by feeding from tubs in the paddock

TRACE ELEMENT LEVELS (PER KG)			
Calcium *	14g	Zinc	3g
Magnesium	9g	Cobalt	25mg
Sodium	185g	Boron	25mg
Iron	0.5g	Selenium	3mg
lodine	112mg	Molasses	15g
Manganese	0.75g	Feed Bokashi	10g
Copper	1.25g	Feedmeal base	200g

^{*} Calcium level in DairyMin® DMX equates to less than 5% of standard daily pasture intake of Calcium and is safe for use pre-calving.

Provides the same range of minerals as the standard DairyMin® DMX, along with additional calcium and phosphorus support for stock grazing on fodder beet.

TRACE ELEMENT LEVELS (PER KG)			
Calcium *	83g	Zinc	2g
Magnesium	72g	Cobalt	17mg
Phosphorus	64g	Boron	17mg
Sodium	121g	Selenium	2mg
Iron	0.4g	Molasses	10g
lodine	73mg	Feed Bokashi	7g
Manganese	0.5g	Feedmeal base	130g
Copper	0.9g		

 $^{^{*}}$ Due to the calcium component we do not recommend feeding DMX Fodder Beet to cows during the 3 weeks prior to calving.

TROUGHTREATMENT



Cowamel

A sweetener that will keep your cows hydrated, whether by improving the taste of available stock water or disguising the bitter flavour of supplements.

- Can simply be added to drinking water via an inline dispenser
- · Also easily administered orally via a drench gun
- Mix directly into powdered or liquid supplements to make them more palatable

20 Litres



mineral supplements

MINERAL CONCENTRATE RANGE

ALL DONAGHYS MINERAL CONCENTRATES ARE IN LIQUID FORM AND ARE READY TO USE

Selenium 5

A vital component of antioxidants that assist in livestock performance and health.

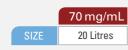
- Improves milk production, fertility and disease resistance
- Can be added to other mineral mixes where extra selenium is required



Copper Chelate



Required for milk production, animal health and fertility as well as calf viability and growth.



- Improves milk production and fertility
- Improves resistance to disease and lameness
- For the prevention of copper deficiency, including secondary copper deficiency due to high levels of competing compounds
- Can be added to other mineral mixes where additional copper supplement is required

Zinc Chelate



Required for immunity, fertility and electrolyte balance.

			75 mg/mL
N	SIZE	20 Litres	200 Litres

- · Improves skin condition, hooves and wound healing
 - For high producing livestock or stock identified as zinc deficient
 - To be used with increased levels of copper supplementation

Cobalt

14



Cobalt is an important vitamin for brain function and production of red blood cells.



- Improves milk production and fertility
- Improves condition and growth rates
- Should be supplemented in known cobalt deficient areas

lodine



Required for energy metabolism, milk production, reproduction and heat detection.

		40 mg/ml
SIZE	20 Litres	200 Litres

- · Improves thyroid function
- Improves condition and fertility
- Increases calf growth rate
- Improves disease resistance

Donaghys recommend regular testing of blood and liver samples in conjunction with veterinary advice to confirm optimum mineral levels are supplied. (Many factors can cause differences in required mineral levels). In areas with specific mineral shortages, additional supplementation may be required.

animal health

BLOAT AND SODIUM MONENSIN



• Can be used in conjunction with ProDairy®



Contains 60g/L Sodium Monensin.

SIZE 1,000 Litres 200 Litres

Registered Pursuant to the ACVM ACT 1997 No. A009276.

Contains 800g/L Alcohol Ethoxylate Propoxylate.

A blended mixture of Alcohol Ethoxylates for drenching and trough treatment as an aid in the prevention of bloat in cattle.

- Cold water soluble
- Viscosity controlled for ease of mix
- Low dose rate for effective control
- Compatible with soluble or suspension additives
- Long persistence time in the rumen

SIZE 1,000 Litres available on request

Registered pursuant to the ACVM Act 1997 No. A010904. Patent pending NZ608649.

Premium Bloat AF

Premium Bloat AF is EO/PO block co-polymer based product for drenching and trough treatment to prevent and control frothy bloat in cows. It is specifically formulated to be safe for use through alkathene piping. Contains 88%w/v EO/PO block co-polymer and food grade red dve as colourant.

200 Litres

- · Safe for use through alkathene piping.
- Cold water soluble
- · Red colour for identification
- Viscosity controlled for ease of mix
- Compatible with soluble or suspension additives
- Low dose rate for effective control
- Long persistence time in the rumen

Registered Pursuant to the ACVM ACT 1997 NoA011688.



animal health

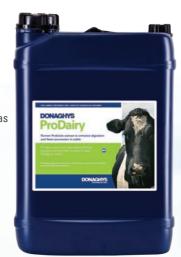


testimonials for ProDairy

ProDairv®

Scientifically developed to stimulate the establishment and activity of healthy microbes in the rumen to enhance digestion, feed conversion and milk production.

- · Stimulates the beneficial bacteria already present in the rumen, rather than attempting to populate the digestive system with bacteria or yeast as classic probiotics do
- · Easy application through inline dispensers, trough dispensers, or by direct oral drenching
- Easier adaptation to feed changes, varying feed quality and times of stress
- · Increases body weight, yield and condition
- Nil withholding period
- Can be used in conjunction with ProMonensin 60



20 Litres | 200 Litres | 1000 Litres

DOSE RATES (see container label for full information)	
CALVES weaning	10mL at weaning, repeat monthly
COWS 1 month prior to calving	10mL/head/day
COWS calving to mating	5-10mL/head/day*
COWS post mating to end of lactation	5-10mL/head/day*
* Use higher rate (10mL) if dietary scouring on lus	sh pastures occurs or when

SCIENTIFICALLY TESTED IN NEW ZEALAND AND

In New Zealand two independent and five in-house scientific trials were performed on pasture fed dairy cows in different regions at different times of the year. In the five in-house trials (one independent), the percentage of milk solid production difference between ProDairy® and control was measured. Body weights or condition scores were measured in four of the seven trials.

SEE WWW.DONAGHYS.COM FOR TRIAL RESULTS If you can show that ProDairy® did not positively affect your production, we will refund the price of the product.

NEW ZEALAND TRIAL RESULTS WITH PRODAIRY®

- Average of 6.4% more milk solids than untreated cows
- Extra 65.3g of milk solids per day on average than untreated cows
- Extra production with no loss of body condition

In New Zealand, the value of increased production from these trials (at a \$8 payout) could yield an extra \$42,000 worth of milk solid income for a 444 cow herd doing 276 days milking**, if results were extrapolated for a season. The cost of ProDairy® for the season at the average volume used in these trials would be around \$9,950 or 8.1c per cow per day, yielding a return of over 7:1.

** Herd figures from LIC dairy stats

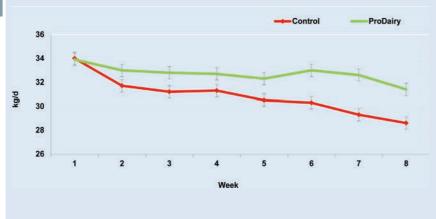
AMERICAN TRAIL RESULTS

INTERNATIONALLY

The University of Georgia, USA trialed 36TMR fed Holstein cows over an 8 week trial period. ProDairy® treated cows showed:

- An average 5.8% increase in milk production with a return on investment of 6:1
- A peak increase of 10.1% in milk solid production on week 7 of the trial.

There was a statistically significant increase in ProDairy® treated cows productivity compared to the Control.



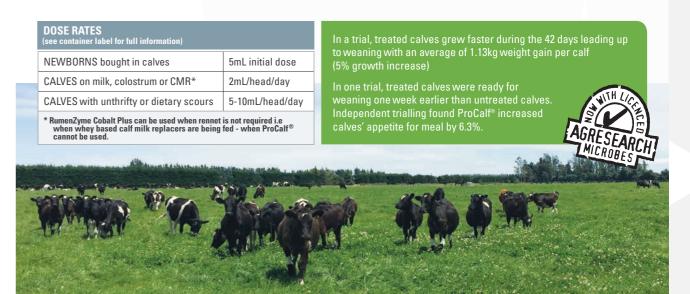
ProCalf®

to promote growth, development and health in calves raised on milk or milk replacer. Provides a scientifically researched

A premium probiotic extract with rennet which includes microbes licensed from AqResearch

- blend of yeast, bacterial extracts and enzymes to ensure full utilisation of liquid feed and aids in the early development of the rumen
- Establishes beneficial microbe populations in the digestive tract for digestion of calf milk, hard feed and pasture
- · Liquid form is easy to mix and use
- · Trials show faster growth and earlier maturity
- Rennet promotes casein clotting to reduce dietary scouring
- Nil withholding period
- Trusted for over 15 years

SIZE 1 Litre | 10 Litres | 100 Litres 5 Litres backpack with gun





DONAGHYS

RumenZyme Cobalt Plus

Probiotic extract formulation designed to activate beneficial rumen microbes

- For use in cattle, deer and sheep
- Promotes rumen development in young stock
- Use at times of feed change
- · Or to improve utilisation of poor quality feed Tested and trialed with proven results
- · Field trials show proven increase in liveweight
- gain
 - 5 Litres 20 Litres

- · Can assist with dung firmness and reduce dags
- Nil withholding periods
- Contains 100% Biological fermentation extracts and 2.5 mg Cobalt per 3mL dose
- RumenZyme Cobalt Plus can be used when rennet is not required i.e when whey based calf milk replacers are being fed-when ProCalf® cannot be used

animal health **DRENCH**



Saturn® Pour-On **DOUBLE ACTIVE POUR ON FOR CATTLE**

Withholding periods MEAT 42 Days MILK 42 Days

DOSE RATE 1mL/20kg 2.5 Litres 5.5 Litres Contains 200 g/L Levamisole and 10 g/L Abamectin.

- Delivers full abamectin and levamisole doses to provide combination efficacy against major internal parasites in cattle under 15 months of age (gastrointestinal roundworms and lungworm)
- Highly effective in the treatment and control of mature and immature strains of Cooperia including those resistant to
- Convenient 5.5L backpack for ease of application
- Double active provides efficacy against major internal parasites in cattle
- Saturn pour on is best used all year round on young stock over 120kg

Registered pursuant to the ACVM Act 1997, No. A010206.

YOUNG STOCK DRENCHES



Concur® Cattle **HiMin Oral DOUBLE ACTIVE ORAL FOR CATTLE**

Withholding periods MEAT 10 Days MILK 12 Milkings (approx. 144 hours)

	DOSE RATE 1mL/20kg
SIZE	1 Litre 5 Litres
Contains 90.6 g/L Oxfendazole (micronized) and	

Also contains 2.50 g/L Copper, 1.25 g/L Zinc, 0.26 g/L Cobalt, 0.76 g/L lodine and 2.02 g/L Selenium.

- Effective against gastrointestinal roundworms, lungworms and tapeworms
- Combines two anthelmintics with alternative modes of action
- Effective against parasites sensitive to one or both drench families
- Assists with prevention of selenium deficiencies • Convenient backpack for ease of application
- Concur Cattle HiMin is a safe and effective drench for calves under 100kg

Registered Pursuant to the ACVM ACT 1997 No. A009980.

18

Venator HiMin Oral DOUBLE ACTIVE SHEEP AND CATTLE ORAL



- Delivers full abamectin and levamisole doses to provide combination efficacy against the major internal parasites of cattle under 15 months of age. (gastrointestinal roundworms and lungworm)
- Low dose drench for use in cattle and sheep (1mL/10kg)
- Helps with resistance to both actives
- Best used on calves/yearlings over 100kgs and lambs over 20kgs

Registered pursuant to the ACVM Act 1997 No. A011650



- parasites, including roundworms, sucking lice and lungworm
- Convenient 6.5L backpack for ease of application
- Eprinomectin is best used in early lactation, for milk production and to increase reproductive performance in first calvers
- Also available in cost effective 20L containers

Registered Pursuant to the ACVM ACT 1997 No. A010357

• Improves milk production in lactating dairy cows • Increase weight gain in growing beef and dairy cattle exposed to

parasite challenge

• Efficacy is not adversely affected if applied when the hide is wet, or if rain occurs shortly after the application

- MoxiPor can be used on cattle and deer all year round
- Also available in cost effective 20L containers

Registered Pursuant to the ACVM ACT 1997 No. A011390.



- Effective against gastrointestinal roundworms, lungworms, biting and sucking lice
- Formulated with the highest quality abamecting
- Proven in the control of internal and external parasites in dairy
- Convenient 5L backpack for ease of application
- ProAbamec is best used all year round on stock older than 15 months of age
- · Also available in cost effective 20L containers

Registered Pursuant to the ACVM ACT 1997 No. A010875.

FLUKE DRENCH



Invicta® Injection **DOUBLE ACTIVE INJECTABLE** FOR CATTLE

5 Litres

1mL/10kg

20 Litres

Withholding periods MEAT 28 Days MILK 14 Days **BOBBY CALVES** 28 days

DOSE RATE | 1mL/50kg 500ML INJECTION Contains 10 g/L Ivermectin and 100 g/L Clorsulon.

- · Effective against gastrointestinal roundworms, lungworms, liver fluke, mites, biting and sucking lice
- Persistant activity against Ostertagia ostertagi for up to 14 days
- Persistant activity against Cooperia spp. for up to 7 days
- Persistant activity against *Dictyocaulus viviparus* for up to 21 days
- Short 14 day milk withholding period for a fluke control during the dry period
- Increase liveweight gain in growing beef and dairy cattle exposed to parasite challenge

Registered Pursuant to the ACVM ACT 1997 No. A009973.



DRENCH GUNS

- Adjustable dial to ensure even and accurate dosing
- Robust and versatile design for increased
- High quality seals for longer product life
- Available in all Farmlands stores

30ML PLASTIC ORAL GUN













30ML PLASTIC POUR ON GUN





2ML & 5ML PLASTIC INJECTABLE GUN



20ML METAL ORAL GUN

+ repair kit



DRENCH GUN ACCESSORIES AVAILABLE INCLUDE

- 10 and 20L draw tube packs
- 16 and 18G Needles
- •T-Bar Nozzle
- Floating Hook Nozzle
- Cattle Nozzle
- A Pour-On Nozzle Kit



ACCESSORIES

Torpedo Dispensers

An efficient, low-cost water system dispenser. Suitable for use with all soluble salts, magnesium, trace elements, powdered and liquid mineral supplements.

- Solid brass head
- Stainless filter
- Up to 24 hours dispensing

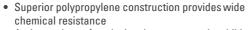


 Full instructions included Comes with a 20L container

Fits 10 & 20 Litres containers

Drum Pumps

Eziaction® drum pump specifically designed for maximum cleanliness when using bulk liquid drums. Suitable for all Donaghys liquid products that do not contain harsh solvents.



- Anti-pumping safety device deters access by children
- Pumps from base of container ensures all contents emptied
- 24 month manufacturer's warranty

Fits 100 & 200 Litres drums

Dairy Mark



Aerosol tail paint for detecting heat in cows and for stock management use as a general udder or flank marker.

- Clear visual guide to maximise calving rate
- Six vibrant, highly visible non-fading fluorescent colours - red, blue, green, pink, orange and yellow
- Weather resistant, non-irritating to cows
- Demonstrates when cows are on heat / ready for insemination
- Multiple colours allow you to differentiate failed inseminations
- Easy to hold can with directional spray nozzle allowing wide or narrow spray patterns
- Developed from Donaghys extensive research and development programme
- Available in 500mL aerosol cans (packed 6 per carton)

SIZE 500 mL 6 Pack

Tail Alert



DAIRY MARKERS AEROSOL / LIQUID

Donaghys uniquely formulated liquid tail paint has been proven for years as a reliable tool for detecting heat in cows and a practical solution for managing herd mating.

- Six bright, non-fading fluoro colours in red, green, blue, orange, vellow and pink
- Demonstrates when cows are on heat/ready for insemination • The oil based paint formula lasts up to 30 days in suitable
- conditions
- Multiple colours allow you to differentiate failed inseminations
- Easy to apply and a choice of 1 litre bottles with self-applicator brush cap or 10 litre pails
- Applicators packed in six 1 litre bottles per carton

SIZE | 1 Litre | 6 Pack | 10 Litres

Sprayline[®]

Sprayline is a market leading scientifically developed formulation for use within sheep, lamb and cattle systems to enable better stock management, identification and heat detection. Also widely used as a multi purpose dairy cow flank and udder marker.

- Farmers should always follow label instructions and Best Practice Guidelines for Clip Preparation which is to remove all contaminated wool from each fleece
- Easy to hold non-slip cans with an easy spray nozzle
- Vivid long lasting colours
- Can be used in all weather conditions
- Made in New Zealand
- Available in red, blue, green, yellow, orange and purple







Proliner® Dual 22 - ROUND (ROUND BARREL WITH SHUT OFF)



Donaghys ProLiner Dual 22 is a 22mm teat end dairy rubber milking liner, designed as a dual fit to suit both short and long standard shells and both 10mm and 12mm claws.

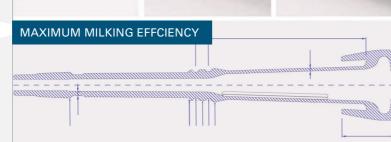
- 9mm internal diameter tail end
- Superior design with reinforced "bumper", available in either shut-off or non shut-off format
- 2 tension rings to suit short and long standard shells
- 3,000 milkings lifespan
- Available in packs of 4

Proliner® Dual 22 - SQUARE (SQUARE BARREL WITH OR WITHOUT SHUT OFF)

SQUARE BARRELLED MILKING LINER







Donaghys ProLiner Dual 22 is a 22mm teat end dairy rubber milking liner, designed as a dual fit to suit both short and long standard shells and both 10mm and 12mm claws.

- 9mm internal diameter tail end
- Superior design with reinforced "bumper", available in shut-off format
- 2 tension rings to suit short and long standard shells
- 3,000 milkings lifespan
- Available in packs of 4

Milk Filters

Manufactured from a super strong filtration material, for the prevention of sediment entering the farm milk supply.

- · Made from super strong 75gsm 100% virgin polyester
- Excellent sediment filtration
- Enhanced flow rate
- Very soft texture and easy to install
- Filter elements will not split or puncture easily
- · Available as white socks or sleeves, in a range of common sizes
- Available in packs of 100

General Purpose Rope



SIZE | 4 and 6mm diameter on 250m reels SIZE | 8, 10 and 12mm diameter on 125m reels

Superfilm rope - for general purpose use.

- · Strong rope
- High abrasion resistance
- UV stabilised
- · Chemical resistant

Soft Grip Rope



SIZE | 8, 10, 12 & 14mm diameter on 100m reels

For use as an animal lead.

- Soft feel
- · Easy knotting
- Attractive gold fleck

- Burn resistant on hands

Irrigator Line



SIZE | 4 and 5mm diameter on 400m reels

Designed for use in travelling irrigators.

- New wire rope replacement product
- Can supply specific lengths on request
- 4mm 1,600kg breakload
- 5mm 2260kg breakload

Cup Remover Braid



SIZE | 4mm diameter on 100m reels

For use in automatic cup removers Strong, lightweight, abrasion resistant and UV stabilised.

- · Synthetic white basic braid-290kg breakload
- Bright red, blue or black coloured polyester double braid- 350kg breakload
- Superspeed performance braid-700kg breakload
- · Challenge high performance braid, white/ blue or white/red-750kg breakload

Back Gate Braid



SIZE | 10, 12 & 14mm diameter on 100m reels

Yachtmaster XS - For backing gates, animal leads and calf pulling.

- Durable polyester braid
- Soft feel for handling
- Can be heat sealed for neat finish
- · Resists hockling and tangling

Winchline



SIZE | 4mm to 12mm diameter

Supplied to specific length as required

Wire rope replacement for travelling irrigators, 4WD Winch ropes etc.

- 8 x lighter, 70% stronger and safer than wire
- No recoil in event of break, safer than chains and wire
- Abrasion resistant coating reduces likelihood of snagging
- Available 4mm to 12mm diameter, larger diameters on request



Mongoose Recovery Tow Strop

For farm equipment recovery.

- · High strength, low stretch strop
- No recoil in event of break, safer than chains
- · Comes with two eye splices in each end
- Length 6 metres







Grunt® 600 **GLYPHOSATE**



SIZE	10 Litres	100 Litres
,000 Litres available on request		

CONTAINS 600g/L glyphosate as the potassium and triethanolamine salts in the form of a soluble concentrate.

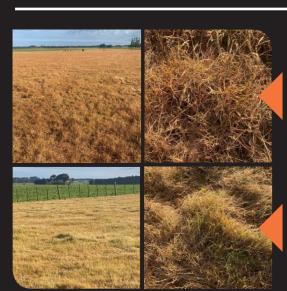
Now with a lot more Grunt.

The strongest fully surfactant loaded liquid glyphosate in the world.

- Fully loaded with environmentally friendly surfactants
- Low application rates compared to any other Glyphosate on the Market
- 5 years research and trial work
- Non-residual, foliar absorbed and translocated herbicide
- Non withholding period, except for ragwort
- Only glyphosate registered at 1,000gs/ha, which means less product applied per hectare.

Registered Pursuant to the ACVM Act 1997 No. P008482. Patent NZ572414.

Glyphosate Strength gms ai / Litre	Rate / Ha applied	Registered gms ai / Ha for effective control
360	4.00	1440
470	3.06	1440
510	2.82	1440
600	2.40	1440
Grunt 600	1.67	1000



Grunt at 2LTRS Hectare 10 days after spraying

Competitor 510 at 4LTRS Hectare 10 days after spraying

Broadleaf Kill 2,4-D Amine

A selective herbicide for the control of broadleaf weeds in cereals and pasture.



- Foliar absorbed and translocated throughout the plant
- Best results are obtained when weeds are not under stress and are actively growing with clean foliage
- Can be tank mixed with most other commonly used pesticides

PASTURE

20 Litres 100 Litres

CONTAINS 400 g/L 2,4-D as the triethanolamine salt in the form of a soluble concentrate.

CONTROLS

Fathen, hedge mustard, wild turnip, nettles, shepherds purse, black nightshade, dock seedlings and regrowth, thistles, calandrinia, fumitory, spurrey, wireweed, willow weed, yarrow, cornbind, vetches, stinking mayweed, chamomiles.

Registered Pursuant to the ACVM Act 1997 No. P007647.

Cronus

PASTURE I FODDERBEET I MAIZE

A selective herbicide for the control of thistles and certain other broadleaf weeds in fodder brassicas, pasture, forestry, turf and many other crops.



- Effective control of yarrow and thistles.
- · Brassicas, cereal and ryegrass may be drilled any time after
- Compatible with most commonly used herbicides.

10 Litres

CONTAINS 300 g/L clopyralid as the monoethanolamine salt, in the form of a soluble concentrate.

CONTROLS

Clover, Californian thistle, daisy, dandelion, hawkesbeard, hawkbit, oxeye daisey, narrowleaved plantain, thistles (annual and biennial), yarrow, ragwort, hemlock, broom, gorse and other weeds.

Registered Pursuant to the ACVM Act 1997 No. P009127.

Rainvel

PASTURE I MAIZE

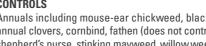
A selective herbicide for the control of difficult broadleaf weeds in cereals, maize, pasture and waste areas. (Controls atrazine resistant fathen in maize).



- · Active against many broadleaf weeds.
- . Useful in assisting the activity of phenoxy herbicides such as MCPA, 2,4-D Ester and 2,4-D Amine.
- · Best control is achieved when Rainvel is applied to seedling weeds.

5 Litres 20 Litres

CONTAINS 500 g/L dicamba as the dimethylamine salt in the form of a soluble



Annuals including mouse-ear chickweed, black medic, black nightshade, chamomiles, chickweed, cleavers, annual clovers, cornbind, fathen (does not control dicamba resistant fathen biotypes), hedge mustard, mallows, shepherd's purse, stinking mayweed, willow weed and wireweed.

Biennials or perennials including Californian thistle, dandelion, docks, fennel, bindweed, hemlock, mallows, perennial clovers, ragwort, selfheal, wild carrot, wild onion and varrow.

Registered Pursuant to the ACVM Act 1997 No. P008815.

Flumetsulam 800

PASTURE I MAIZE

For post-emergent management of broadleaf weeds in clover, lucerne, chicory, new and mature pasture and maize.



- Will control or suppress broadleaf weeds in crops or pastures while selectivity to clovers, lucerne and chicory is preserved.
- On mature pasture, Flumetsulam 800 may be applied in either spring or
 CONTAINS 800g/kg flumetsulam in the autumn for buttercup control. Repeat spring treatments for two successive form of a water dispersible granule. seasons will maximise control of Giant Buttercup.

Chickweed, spurrey, wild radish, hedge mustard amaranthus (redroot), cleavers, black nightshade, fathen, shepherds purse, mallow, annual buttercup, creeping yellow cress, yellow gromwell, stinking mayweed, wireweed, sorrel, giant buttercup.

Registered Pursuant to the ACVM Act 1997 No. P008589



FODDERBEET

Atrazine 500

 $Post-emergent\ her bicide\ which\ selectively\ controls\ certain\ broadleaf\ weeds\ and\ grasses\ in\ various\ crops.$



- Absorbed through the leaves and roots to inhibit photosynthesis.
- Compatible with Donaghys Grunt 600 and Acetochlor 840.

SIZE	20 Litres					
1,000 Litre	1,000 Litres available on request					
CONTAINS 500g/L Atrazine in the form of a suspension concentrate.						

MAIZE

CONTROLS

Fathen, black nightshade, willow weed, redroot, amaranths, apple of Peru. Annual grasses, and seedlings broadleaf weeds such as shepherds' purse, subterranean clover and storksbill. Some fathen plants are resistant to Donaghys Atrazine 500 and an alternative herbicide should be used.

Registered Pursuant to the ACVM Act 1997 No. P008693.

Acetochlor 840

For the selective pre-emergent control of annual grasses and many broadleaf weeds in grain, silage maize and sweetcorn.



- Provides up to 10-12 weeks residual control.
- Applied directly after planting.
- Absorbed through the shoots of emerging weeds, causing death.
- Compatible with Atrazine and Dicamba.
- Contains Dichlormid 10-30% as a crop safener.

SIZE	20 Litres	200 Litres		
1,000 Litres available on request				
	S 840g/L Acetoch	nlor in the form of te.		

CONTROLS

Commonly occurring annual grass weeds including; summer grass, barnyard grass, bristle grass, green bristle grass, seedling Johnson grass, smooth witch grass, witch grass. Broadleaf weeds include; amaranthus spp, black nightshade, chickweed, redroot, Scotch thistle, seedling dock, Shepherd's purse, stinking mayweed, twin cress.

Registered pursuant to the ACVM Act 1997 No. P008670.

MAIZE

MAIZE

Formaize

A post-emergent herbicide for the control of perennial and annual grasses and broadleaf weeds in grain and silage maize crops.



- Rapidly absorbed by weed leaves and translocated throughout the plant.
- Rainfast 6 hours after application.

SIZE 500grams | CONTAINS 750 g/kg nicosulfuron in the form of a water dispersible granule.

CONTROLS

Grasses: Barnyard grass, bristle grass, couch, crowfoot grass, kikuyu, pasture grasses (volunteers), rough bristle grass, smooth witchgrass, summer grass, wild oats.

Broadleaf: Bathhurst bur, black nightshade, groundsel, fathen, fumitory, redroot, sow thistle, thorn apple, twincress, water pepper, wild portulaca, willow weed.

Registered Pursuant to the ACVM Act 1997 No. P008974.

Lektor

A selective herbicide for the control of broadleaf weeds in grain and silage maize.



- Can be applied either pre or post emergence.
- It is absorbed through the leaves, shoots and roots of weeds, interfering with carotenoid biosynthesis.
- Best used in conjunction with other herbicides to provide broad spectrum weed control.

SIZE 5 Litres 20 Litres CONTAINS 480 g/L mesotrione in the form of a suspension concentrate.

CONTROLS

A range of broadleaf weeds including Bathhurst bur, black nightshade, chickweed, dandelion, fathen, (includes triazine resistant fathen), fennel, fishtail oxalis, galinsoga, hairy nightshade, mallow, redroot, seedling docks, spurrey, stagger weed, twin cress, willow weed and wireweed.

Registered Pursuant to the ACVM Act 1997 No.P008780

Ethos

Has both pre and post-emergent activity.

Absorbed by young shoots and roots of the plant.

 Ethofumesate is believed to inhibit photosynthesis and respiration within the susceptible weed.

A selective herbicide for the control of barley grass in pasture and weed control in turf, fodder beet and red beet.

SIZE 10 Litres |

CONTAINS Contains 500 g/L Ethofumesate in the form of a suspension concentrate.

CONTROLS

Barley grass in pasture, grass weeds in ryegrass turf and for pre and early emergence weed control in red beet.

Registered Pursuant to the ACVM Act 1997 No. P009184.

Diemos EC FODDERBEET

A selective herbicide for control of broad leaved weeds in fodder beet.



- Effective contact herbicide for the control of a wide variety of broadleaf weeds in beet crops.
- Best results are obtained by applying Diemos EC following a pre-emergence application of Donaghys Ethos herbicide.
- Also available in the form of a suspension concentrate.

10 Litres

CONTAINS 160 g/L Phenmedipham and 160 g/L Desmedipham in the form of an emulsifiable concentrate

CONTROL

Seedling stages of: chickweed, fathen, fumitory, groundsel, redroot, shepherd's purse, spurrey, nettle and twin cress. Black nightshade, cornbind and willow weed are controlled only up to four true leaf stage.

Registered Pursuant to the ACVM Act 1997 No P009682.

FODDERBEET

Tron

A selective post emergence herbicide for the control of certain weeds in red beet, fodder beet, sugar beet and mangolds.

Controls a wide range of broadleaf weeds.

Uptake is predominantly via the roots, with some uptake via the leaves.

• For best results apply to young weeds.

SIZE 10 Litres |

CONTAINS 700g/L metamitron in the form of a water suspension concentrate.

CONTROLS

Amaranthus spp., annual poa, buttercups (seedling), chickweed, docks (seedling), fathen, galinsoga, groundsel, hawksbeard, henbit, matricaria spp. (stinking mayweed and chamomiles), nettles, pennycress, Scotch thistle (seedling), shepherds purse, sow thistle, speedwells, spurrey, twin cress, white clover, yarrow (seedling) and other weeds.

Registered Pursuant to the ACVM Act 1997 No. P009587.

BRUSHWEED HERBICIDE

100 Litres

Brushweed Kill Tripic

 $Her bicide \ for \ the \ control \ of \ gorse, \ blackberry, \ lupin, \ sweet \ briar, \ matagouri, \ barberry \ and \ other \ brushweeds.$



- Powerful brushweed killer.
- Effective for release spraying in radiata pine and broadleafweed control in turf.
- Safe to most desirable grasses.

CONTAINS 300g/L triclopyr as the butoxyethyl ester and 100g/L picloram as the triisopropanolamine salt in the form of an emulsifiable concentrate. Also contains

460g/L diethylene glycol solvent.

20 Litres

CONTROLS

Blackberry, broom, gorse, lupin, matagouri, sweet brier, tutu and woolly nightshade.

Registered Pursuant to the ACVM Act 1997 No. P007978.



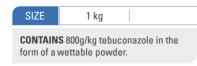
crop protection



Mvco-RF®

For the control of Rust and Fusarium species in pasture and Crown Rust and Stem Rust and Blind Seed in ryegrass seed crops.

- Controls Rust and Fusarium in pasture resulting in cleaner, healthier and more palatable pasture
- Prevents the slowing of growth, rate of aging and death of grasses caused by Rust and Fusarium
- Prevents loss of dry matter production
- Reduces ill thrift in stock caused by Rust and Fusarium
- Compatible with Donaghys N-Boost®



FUNGICIDES

Registered Pursuant to the ACVM Act 1997 No. P007625.

FACIAL ECZEMA CONTROL

LIQUID Mycotak®

Pasture applied fungicide for the control of the causal organism of facial eczema.



- Offers up to six weeks protection from facial eczema
- Eliminates the spores in pasture that cause toxins to build up in the liver
- · Reduces the need to treat stock with Zinc
- Absorbed into the plant and transported via the sap stream outwards and upwards
- Compatible with Donaghys N-Boost® and other agrichemicals
- Liquid form easy to use
- 20 Litres covers 66 hectares

Registered Pursuant to the ACVM Act 1997 No. P008688.



Mycowet®

A non-ionic organosilicone 'Super Spreader' surfactant blend for the application of Donaghys Liquid Mycotak® and Donaghys Myco-RF® fungicides.

SIZE	7 Litres
CONTAINS organic flu	S A proprietary organosilicone/ uid blend.

- Lowers the surface tension of spray solutions well below commonly used surfactants
- Enhances the spreading and foliage deposition of Liquid Mycotak® and Myco-RF® fungicides
- When used as directed, will reduce off-target spray drift by up to 25%
- Use where coverage is critical and particularly suited to low volume spraying
- Use for aerial applications where water coverage is a limiting factor



Wetter Sticker

An organosilicone surfactant / penetrant specifically formulated to assist the penetration and uptake of Donaghys herbicide range.

- Uptake of Donaghys herbicide products is more rapid and the rain-free period is generally reduced
- · Lowers the surface tension of spray solutions

SIZE	5 Litres
CONTAINS	\$ 100% organosilicone surfactant.

SURFACTANTS



Slick 600

Paraffinic oil designed to enhance the sticking, spreading and wetting of some herbicides.

- Effective in marginal conditions where plants are waxy, weather hardened, hairy, or dusty
- . Use with herbicides such as Flumetsulam 800 and Lektor

SIZE	5 Litres	20 Litres			
CONTAINS paraffinic oil and polyoxyethylene dioleate					

TERBOHEX[®]

A selective herbicide for the control of grass and broadleaf weeds in radiata pine.

 New patented Suspension Concentrate formulation containing the two triazine herbicide compounds Terbuthylazine and Hexazinone offers a more practical dual active product. SIZE 20 Litres | 1,000 Litres

CONTAINS 425g/L terbuthylazine and 75g/L

FORESTRY

• Stable for extended periods of time

• Retains stability when diluted prior to application

CONTROLS

Barley grass, black nightshade, broom (seedling), browntop, catsear, chickweed, clovers, cocksfoot, doves foot, fathen, fireweed, gorse (seedling), nodding thistle, pampas (seedling), poa, ryegrass, scotch thistle, shepherds purse, storksbill, sweet vernal, tall fescue, willow weed, yorkshire fog, and other annual grass and broadleaf weeds.



TERBOH

Insec 480

A broad-spectrum organophosphate insecticide for the use in fruit crops, cereals, pasture and forage crops.

- Provides control of pests on various crops.
- · Compatible with most commonly used pesticides

SIZE	5 Litres	_	
CONTAINS Chlorpyrifos 480 g/litre.			

CONTROLS

Leafroller, aphids, nysius (wheat bug), springtails, Argentine stem weevil, mealy bug, scale crawlers, thrips, grapevine weevil, greedy scale, sitona weevil, army caterpillar, corn earworm, cutworm, onion thrips, Lucerne flea, porina caterpillar, Tasmanian grass grub, wooly aphid, brown beetle, spiders, ants & slaters.

PLANT GROWTH PROMOTER



Donaghys GibbSTART MAX

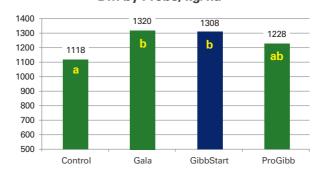
A Gibberellic acid product for the stimulation of pasture growth in late Autumn and early Spring.

- Stimulates extra pasture production when extra feed is needed and when pasture growth is limited by cooler soil temperatures
- Liquid formulation eliminates dissolving and dust issues
- Easy to mix and measure
- Can be tank mixed with Donaghys selective herbicides 2,4-D Amine
- Compatible with Donaghys N-Boost® and dissolved urea fertiliser
- 1L is enough to cover 25 hectares
- When used on the shoulders of the season GibbSTART MAX can be an
 effective tool to reduce the amount of nitrogen required, helping meet
 the new 190kg of nitrogen per hectare cap



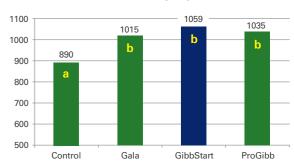
Registered Pursuant to the ACVM Act 1997 No. P008774.

DM by Probe, kg/ha



Pasture dry matter as measured by pasture probe reading 30 days after application. Means followed by the same letter are not significantly different

DM by Mowing, kg/ha



Pasture dry matter as measured by mowing 30 days after application. Means followed by the same letter are not significantly different.

DONAGHYSPERFORMANCE FIRST







the N-Boost® System on pasture

Grow the same amount of dry matter with half the usual amount of nitrogen.*

The N-Boost® and dissolved urea solution is then sprayed onto pasture with a conventional boom sprayer or boom jet.

* Based on trials comparing the N-Boost® System to use of 80kg of urea

1. Dissolve urea

At a rate of 40kg/ha in 200L of water using a Donaghys supplied mixing station

2. Add N-Boost®

At 3L/ha

3. Spray on pasture

200L/ha of the total spray mix, either self applied or using a contractor

N-Boost® contains a complex of bioactives derived from a fermentation of selected microorganisms. Several of these such as adenine compounds stimulate the activity of chloroplasts. Others such as non-protein amino acids also improve the ability to cope with osmotic stresses.

how does N-Boost® work?

The foliar application of dissolved urea results in the nitrogen being in a plant available form (ammonium), dramatically improving the time and energy efficiency of nitrogen uptake. Studies show that most of the nitrogen can be taken up into the leaf within the first 12 hours after application. This avoids the lag in N uptake and utilization before pasture is grazed in a short rotation. But applying foliar urea alone is not enough to gain the benefits seen with the N-Boost® system partly because of the osmotic stress from the urea and partly because recently grazed pasture has low energy status for processing nitrogen.

Scientific studies at Lincoln University found that N-Boost® stimulates plant cell organelles, particularly chloroplasts. These are the key cell components of the plant responsible for energy production, storage, and release. The studies also demonstrated that N-Boost® allows plants to better cope with osmotic stress. The combination of plentiful nitrogen (from foliar urea), plentiful energy release (from chloroplast stimulation) and osmotic stress reduction uniquely maximizes the nitrogen response of pastures.

The microorganisms utilised in the production of N-Boost® are commonly found in soils and are all on the GRAS (Generally Recognised As Safe) list of ACVM. After production has been completed, the final packaged N-Boost® product contains no live microorganisms and is a non-DG product.

N-Boost® increases chlorophyll activity in the plant

N-Boost® stimulates plant energy

N-Boost® increases plant nutrient uptake

- Allowing the plant to produce more carbohydrates
- Allowing more amino acids to convert into protein
- Increased protein production = Increased growth

benefits

meet the 190kg/ha nitrogen cap

Donaghys N-Boost® can reduce farmer's nitrogen fertiliser use to be within the regulations whilst continuing to grow the same amount of dry matter without compromising pasture quality.

maintain profitability

Modelling partial use of the N-Boost® System (refer scenario 2) allows farmers to maintain profitability when compared to pre N cap conditions. Full use of the N-Boost® System can potentially allow farmers to increase their profitability (refer scenario 3)

maintain stock units and production

Trials show that the N-Boost® System doubles the nitrogen response of pasture compared to 40kg/ha of urea alone allowing farmers to maintain production whilst reducing nitrogen use.

Metabolisable energy (ME) and other feed quality indicators of pasture grown are maintained using the N-Boost® System. By using less nitrogen, clover levels in pasture can be increased leading to subsequent increased potential in atmospheric nitrogen fixation.

decrease environmental impact

Using the N-Boost® System allows you to reduce your nitrogen application, which is shown to reduce nitrogen leaching by up to 15%*. A reduction in nitrogen can result in a decrease in nitrous oxide emissions.

* Modelling of a typical 160ha Canterbury dairy farm, using the Overseer® nutrient budget software, indicated up to a 15% reduction in nitrogen leaching from using the N-Boost® System at 40kg/ha of urea compared to 80kg/ha of urea only, without compromising pasture production.





FARMING WITH NITROGEN RESTRICTIONS

regulatory requirements

NATIONAL ENVIRONMENTAL STANDARDS FOR FRESHWATER

FARMING UNDER 190 KG PER HECTARE **NITROGEN CAP**

From 1 July 2021 onward, a synthetic nitrogen fertiliser cap was placed on any contiguous parcel of pastoral land.

Under this legislation and in general terms all pastoral farmers need to keep synthetic nitrogen fertiliser use below 190 kg N/ha/year.

Donaghys N-Boost® can ensure farmer's nitrogen fertiliser is within the new regulations whilst continuing to grow the same amount of dry matter without compromising pasture quality.

farmer inputs

various scenarios (examples only)

This table compares an average Canterbury **Current Situation** (N cap)

1. Partial use of N-Boost®

2. Full use of N-Boost®

Total KG Nitrogen applied per ha p.a.	184		184		184	
CALCULATED RESULTS	per ha	Total farm	per ha	Total farm	per ha	Total farm
Total Dry Matter grown due to nitrogen application	2,208	514,464	3,091	720,250	4,416	1,028,928
Total milk solids produced	173	40,193	242	56,270	345	80,385
Total milk solids revenue earned	\$1,553	\$361,733	\$2,174	\$506,426	\$3,105	\$723,465
Cost of solid Urea now	\$492	\$114,636	\$492	\$114,636	\$492	\$114,636
Cost of solid urea application now	\$67.50	\$15,728	\$40.50	\$9,437	\$0	\$0
Cost of N-Boost® now	\$0	\$0	\$77.64	\$18,090	\$194.10	\$45,225
Cost of N-Boost® application now	\$0	\$0	\$88.00	\$20,504	\$220.00	\$51,260
Total costs including application p.a. now	\$560	\$130,364	\$698	\$162,667	\$906.10	\$211,121
Total costs including application per ha, per round	\$111.90		n/a (2 systems)		\$90.61	
CONTRIBUTION TO PROFIT FROM NITROGEN USE	\$993	\$231,369	\$1,475	\$343,759	\$2,199	\$512,344
Difference in calculated profit from current situation				\$112,390		\$280,975



the impact using N-Boost farming system.

This shows the contribution to profit of N use with solid urea applications to 190 kg N/ha.

In this scenario (1) using solid urea plus partial use of the N-Boost® system will allow you to meet N limits and increase annual profit by \$112,390 (i.e. \$343,759 - \$231,369)

By fully adopting adopting the N-Boost® system you can meet N Limits while maximising Dry Matter response to N applied, reduce nitrogen leaching up to 15%** while increasing annual profit by **\$280,975** (\$512,344-\$231,369).

Farm Size 233 Hectares-NZ Dairy Statistics 2018/19 (LIC & Dairy NZ), Pre N cap annual N use 240 KG N/Ha, Pasture N Response to solid N 12 KG DM/KG N, Pasture N Response to N-Boost* 24 KG DM/KG N, 1 KG milk solids per 12.8 KG DM*, Revenue \$300 per KG milk solids, Urea price \$1,230 / tonne (delivered), N-Boost* rate 3 Litres / hectare, N-Boost* cost \$6.47 / Litre (scenario's 1 & 2), Solid application cost \$13.50 / hectare, N-Boost* application cost \$22.00 / hectare, N-Boost*

Disclaimer: The above tables are examples based on Donaghys scientific pasture trials and the resulting average nitrogen responses. Actual results may vary from farm to farm

^{* 12.8} KG DM required per 1 KG milk solids for a 500 KG dairy cow at 11.0 MJ ME/KG DM- reference: Dairy NZ lactating cows web page

** Modelling of a typical 160ha Canterbury dairy farm, using the Overseer at 40kg/ha of urea compared to 80kg/ha of urea only, without compromising pasture production. (No allowance for any reduction in nitrous oxide emissions has been made in these examples)



farmer testimonials

application of N-Boost®

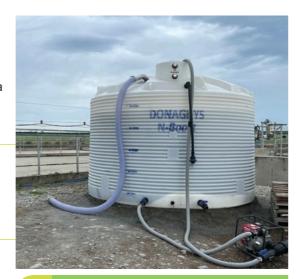
To apply the N-Boost® System onto pasture, 40kg/ha of urea is dissolved in water with 3L/ha of N-Boost® and typically sprayed at a total spray mix volume of 200L/ha.

DISSOLVED UREA

Urea is easily dissolved in water in an N-Boost® Mixing Station (which can be supplied by Donaghys) or by agitating in a spray tank.

APPLICATION

The N-Boost® and dissolved urea solution is then foliar sprayed onto pasture with a conventional boom sprayer or by boom jet. This can be self applied or using a contractor. Refer to label for usage instructions.



5,000, 15,000 & 25,000 Litre mixing stations available (tank, pipes, pump and fittings).

For details and conditions, please contact Donaghys.

N-BOOST® AS PART OF A SPRAYING SYSTEM

The N-Boost® System can be incorporated with existing spray applications allowing the farmer to apply multiple products at once, saving time and money.

broadleaf pasture herbicides

N-Boost® has also been tank mixed and found to be compatible with commonly used broadleaf pasture (phenoxy) herbicides e.g. Donaghys 2-4D Amine and Donaghys Flumetsulam.

gibberellic acid

Donaghys GibbSTART MAX can be mixed with N-Boost® and applied strategically during shoulder periods to stimulate extra pasture production.

facial eczema and rust control

Donaghys Liquid Mycotak can be added to the spray mix to provide control of the causal organism of facial eczema.

Liquid Mycotak offers up to six weeks protection against facial eczema.

Donaghys Myco-RF can be used with the N-Boost® System for the control of Rust and Fusarium in pasture resulting in cleaner, healthier and more palatable pasture.

COOMBE FARM MITCHELL COOMBE

LOCATION Morrinsville
SIZE 197ha effective area
COWS 650



66 We have had good results from N-Boost® this season. I was looking for an option that could lower our nitrogen use while looking at ways to maintain our production.

We are trying this on one of our farms and it has been very successful. We've had feed available during a tough January.

Going into rounds with strong covers with good clover content where we've used N-Boost® has been excellent. • 15

DROMORE DAIRIES SIMON AND BEC RIORDAN

LOCATION Dromore, Ashburton
SIZE 540ha effective area
COWS 2,088

11 Traditionally the farm here has been an intensive operation and a high nitrogen user over the years. We've always thought we've used it efficiently – but we were still a high user. When 190kg/ ha cap came in we had to reduce our usage by more than 100kg a hectare.

We've just been following the programme, following the cows with 40kg Urea foliar sprayed with N-Boost® applied. Plus, we've had two applications of maintenance fertiliser. We're waiting 5



days post grazing so there is more leaf on the grass for a good response.

We've had even pastures with good clover this season. The cows are eating it out nice and evenly as there are fewer urine patches. It's been noticeable on the dry days.

In the N-Boost® trial it's ticked a lot of boxes, the results speak for themselves. We have dropped our usage by over 100kgs of N. We don't want our legacy to be polluters, we pride ourselves on looking after the environment. 37





publications

The scientific N-Boost® pasture trials have been peer reviewed both in New Zealand and internationally including trial design, statistical analysis, product performance and an overall meta-analysis of the data.

proven

PROVEN IN NEW ZEALAND AND INTERNATIONALLY

PATENTED IN

5

COUNTRIES

INTERNATIONAL PUBLICATION

N-Boost® has been peer reviewed and published in the Journal of Plant Nutrition.

OVER

10

YEARS ON
NZ FARMS

5 PEER REVIEWS

The pasture trial data reports of N-Boost® have been peer reviewed by five independent parties.

53
EXTERNAL ORGANISATIONS

370 TRIALS

Since 2008, there have been over 370 pasture and crop trials conducted by 53 independent universities and organisations.

AsureQuality Peer Review

This report by AsureQuality reviews the New Zealand field trials on pasture conducted by Donaghys to evaluate pasture responses to the application of N-Boost® in association with urea. It considers the design and execution of the field trials as well as the analysis and reporting of results. "Overall, the adopted trial design and statistical analyses are scientifically robust."

ASUREQUALITY REVIEW; AUG 2009

Fertiliser Quality Council Peer Review Report

This Fertiliser Quality Council peer review is a report of the Expert Panel on the pasture trial programme conducted by Donaghys to support their claims regarding the agronomic performance of N-Boost®. "This current review concludes that the overall trial program has been designed and conducted in a scientifically credible manner."

FERTILISER QUALITY COUNCIL REPORT; SEP 2012

Fertiliser and Lime Research Centre

A paper entitled "Nitrogen Response Effect of LessN": A Meta-Analysis" was presented at the Fertiliser and Lime Research Centre (FLRC) Conference at Massey University on 12-14 February 2013.

JENKINS, T.A. AND RANDHAWA, P.S. (2013). NITROGEN RESPONSE OF LESSN: A META-ANALYSIS. IN: ACCURATE AND EFFICIENT USE OF NUTRIENTS ON FARMS. (EDS L.D. CURRIE AND C L. CHRISTENSEN).

Journal of Plant Nutrition, USA: How well do fertilizer enhancers work?

N-Boost® biostimulant sprayed with dissolved urea increased pasture nitrogen response by an equivalent of 18.0 kg N/ ha compared to urea alone in nitrogen responsive and label conditions trials. This was similar to a manufacturer claim that the product increases nitrogen response by an equivalent of 18.4 kg N/ha.

VSN New Zealand Ltd

"I would conclude that on average there was less than a 3% difference between the two treatments [LessN° System vs. 80kg urea per hectare]."

DR DAVID BAIRD; OCT 2012.

"The average addition[al] kg of N over 40 kg required to give the same response as LessN is 39 kg with a 95% interval of (35-44) kg."

DR DAVID BAIRD; OCT 2012

Saville Statistical Consulting Ltd

"In general terms, the LessN40 treatment yielded twice the DM response per kg of applied nitrogen as did the two treatments with the same rate of applied nitrogen (40 kg urea/ha), and was equivalent to the two treatments with twice the rate applied urea (80 kg/ha)."

DAVE SAVILLE; OCT 2012

Donaghys N-Boost® is the original scientifically proven and trusted Donaghys LessN® with the same ingredients and method of application.





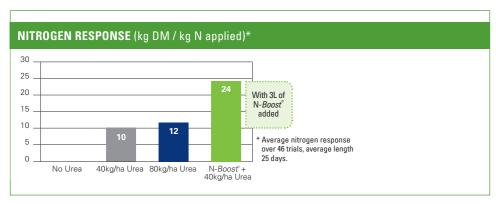
pasture trials

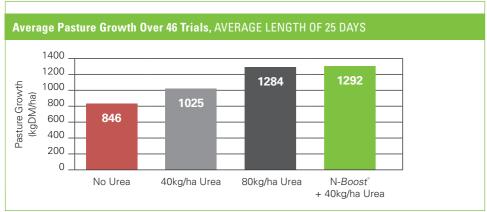
67 trials nationwide have been conducted on a mixture of dryland and irrigated clover based pasture, making it the largest nitrogen response study on pasture in New Zealand since 1981.

The trial periods ranged from 15 to 187 days with the average length of most trials being 25 days.

Over 100,000 individual pasture

measurements were taken.
Of the trials conducted, seven trials did not show a nitrogen response to urea application, seven were not conducted in accordance with Donaghys recommendations (i.e. off-label) and another seven did not include a treatment with 40kg/ha of urea.

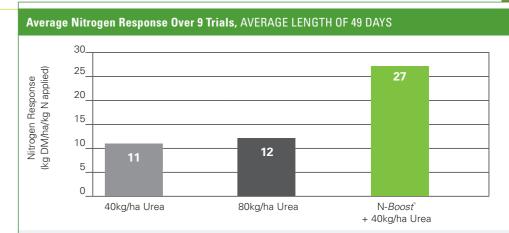




extended pasture trials

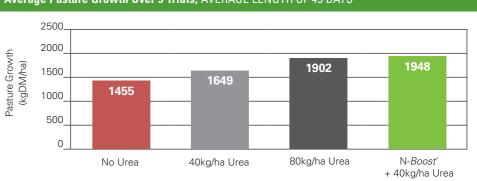
Nine extended trials were conducted past one grazing round (average of 49 days) to assess the residual effect of N-Boost®.

Five of these trials were independent and four were in-house.



Over the average of these trials, 27kg/DM per kg of Nitrogen was grown with the N-Boost* System, compared with 12kg/DM with 80kg/ha of urea and 11kg/DM with 40kg/ha urea applied.



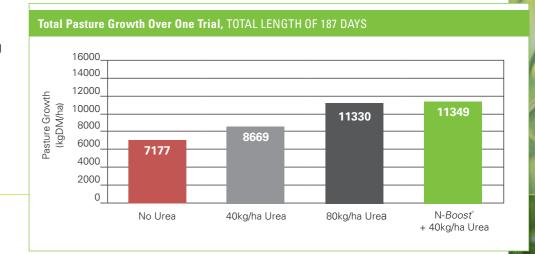


Extended trials proved that the residual effect of the N-Boost* System is similar to an application of solid urea at 80kg/ha as an average of 1948kg of DM was grown with the N-Boost* System compared to 1902kg of DM with 80kg/ha urea.

ONE TRIAL WAS ALSO CONDUCTED THROUGHOUT AN ENTIRE MILKING SEASON (SEVEN GRAZING ROTATIONS)

Treatments were reapplied before grazing three and grazing six.

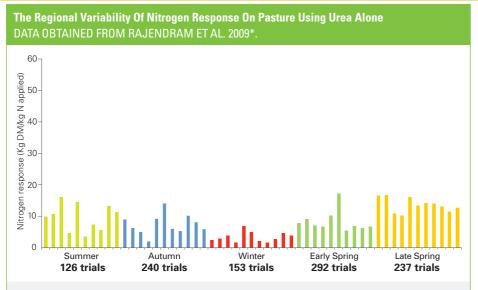
Using 120kgs less urea, the N-Boost® treatment grew similar amounts of pasture to the 80kg spread urea treatment.



variability of nitrogen fertiliser response

Applying urea alone will have variable results on pasture response due to external factors such as soil temperature, moisture and existing soil nitrogen.

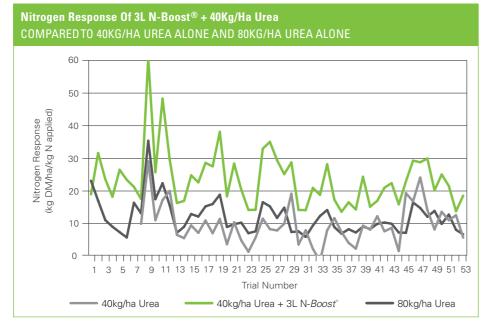
Using the N-Boost®
System will also have variable results on pasture response but trial results show that the N-Boost® System will still double the pasture response to 40kg of urea per hectare.



Each bar represents from left: Northland/Auckland, Waikato, Bay of Plenty, Taranaki, Lower North Island, East Coast North Island, Northern South Island, Canterbury, West Coast South Island, Lower South Island and Central Otago.

UREA AND THE N-BOOST® SYSTEM HAVE SIMILAR VARIABILITY

Using the N-Boost®
System will also have variable results on pasture response but trial results show that the N-Boost® System will still double the pasture response to 40kg of urea per hectare.



N-Boost® should only be used when a nitrogen response can be expected. Soil temperatures must be 10°C or above. Ensure sufficient pasture cover for optimum foliar uptake (1400-1600kg DM/ha). For best results apply the N-Boost® System 3-5 days after grazing. Sufficient soil moisture content is required for pasture to respond. Avoid application in very hot or windy conditions or within 6 hours of impending heavy rain.



cropping with N-Boost®

application on crops

In cropping situations, 3-6L/ha of N-Boost® is applied as a foliar application with water, sprayed at an appropriate water volume (50-200L/ha). N-Boost® solution is then applied to the target crop at specific growth stages in addition to standard fertiliser applications.

To save costs, N-Boost® is recommended to be used at the same time as a sprayed on herbicide, fungicide or insecticide application (with or without the addition of foliar nitrogen).

Conditions and timing for spraying N-Boost® on to crops vary depending on individual crop types.

Contact your local Donaghys Territory Manager for further information.

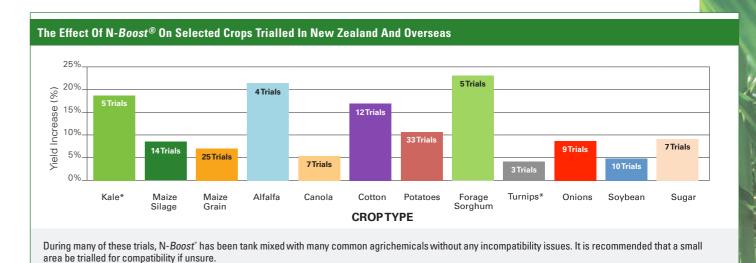
increase crop yields

Crop Trials

N-Boost® is recognised internationally where it is largely used in broadacre and intensive cropping situations. N-Boost® has been proven to provide commercially viable yield increases on a range of significant broadacre and intensive vegetable crops. Over 250 replicated trials have been conducted on 25 different crop types. In trials designed to quantify yield improvement, the overall average yield increase for the N-Boost® treated crops was 10.1% compared to the untreated crops.

10.1%
CROP YIELD
INCREASE

In trials, the overall average yield increase was 10.1% for N-Boost® treated crops, compared to untreated crops.



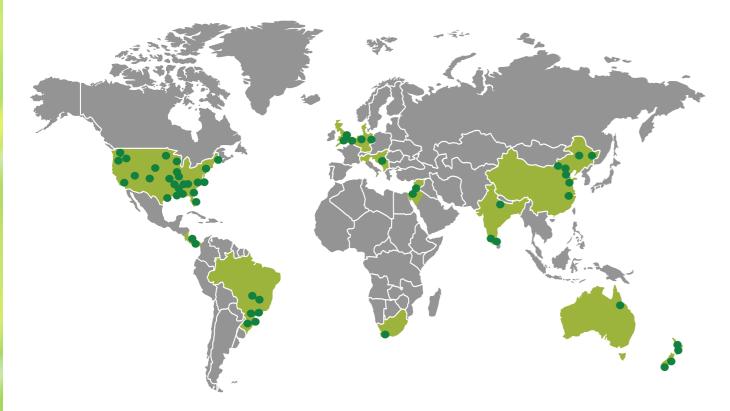
Donaghys N-Boost® is the original scientifically proven and trusted Donaghys LessN® with the same ingredients and method of application.

^{*} Nitrogen Fertiliser Trial Database: A Valuable Resource. Climatic Factors and First Cut Response to Nitrogen Application. In: Nutrient management in a rapidly changing world (Eds L.D. Currie & C.L. Lindsay), pp. 191-204. Fertiliser and Lime Research Centre, Massey University, Palmerston North, NZ.

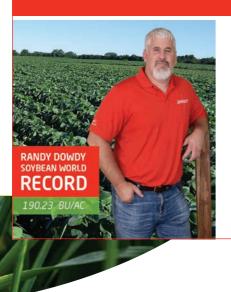




N-BOOST AROUND THE WORLD



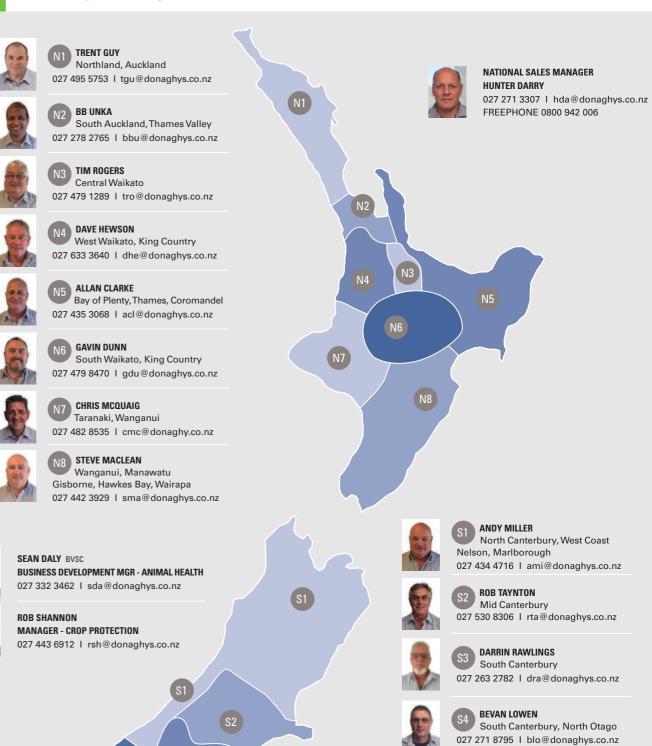
N-BOOST HELPED GROWER SET NEW WORLD RECORD FOR SOYBEAN YIELD



Georgia USA grower Mr R Dowdy broke the world record for soybean yield with 190.23 bushels per acre (12.8 tonnes/ha) of soybeans. This surpasses his previous record of 171 bushels per acre (11.5 tonnes/ha) in 2016.

N-Boost® was among the key crop inputs credited with helping this renowned USA grower set a new world record for soybean yield in the 2019 Georgia Soybean Production Contest, and was part of a core soybean nutrition programme designed to help soybeans reach their full genetic potential.

territory managers







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KEVIN MUIR South & West Otago

Northern Southland

CALEB SMITH



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TO ORDER OR FOR FURTHER INFORMATION about these products please contact your local Donaghys Territory Manager or phone Donaghys Customer Services on the number below:

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