

Power to the Ground Newsletter

HO HO HO!



Time Flies ... 2023 Is Done and Dusted!

You could push me over with a feather as it is already December 2023! And what a year it has been.

New Zealand hasn't seen weather like we've had this year for many, many years. The North Island got hit by Cyclone Gabrielle followed by Cyclone Hale. Then later in the year the South Island particularly the bottom end got hammered. They could quite rightly call it, The Big Wet. The devastation this created for our farming and agricultural communities was horrendous. We trust all those people affected this year have recovered and/or are still recovering.

The latest news from the weather gurus is that we are in for an El Nino, very dry weather pattern from September this year. As of yet it hasn't happened. If the Big Dry does occur, then it will be back to the notes on how to farm and grow in dry conditions.

On the economic front the dairy, beef, lamb, and the avocado sectors have all suffered poor financial returns. On top of that interest rates have certainly been challenging. While these sectors wait for an upturn in returns the Kiwifruit sector is leading the way with positive financial returns.

Nitrosol's presence is improving in all these sectors as farmers and growers experience the benefits of a tried-and-

true foliar fertiliser with reduced costs and improved environmental outcomes. Nitrosol is constantly working on new and improved products for these sectors. See our product feature on our new Nitrosol EcoGro development. This product is based on hydrolysed plant protein and in trials is achieving the same results as our hydrolysed meat and fish blood and bone products.

Just like you, the growers, and farmers, we have seen so many raw materials, freight and packaging costs increase as never before, with many increases well over 100%. Be assured when these prices come back, we will pass them on to our customers.

Now to the fun stuff!! The All Blacks came second in the world cup, not quite the result we wanted, but we thrashed Australia recently in the Rugby league test. The Americas cup is looking good for New Zealand and we made the semi finals in the cricket world cup. The Football Ferns gave their all in the women's world football cup and Paul Coles is setting the world on fire with his squash titles. Well done New Zealand, punching well above our weight as usual.

In the crazy world of politics, the country voted for change, and we now have a new government. Here is to hoping this lot is better than the last lot? In particular,

there needs to be a more pragmatic and considered focus on the agricultural and horticultural sectors.

So, now it's time to relax and leave your cares and worries behind.

You have all grafted this year, you've earned a break and well done to you all. You deserve to leave work behind and have huge amounts of fun doing whatever spins your wheels over the Christmas and New Year period.

Get ready to make all these New Year resolutions and to spin all the good yarns over some great food and a few chilled ones. Make sure the BBQ is primed and ready to go, the cricket bat and ball loaded, the sunscreen packed, and last but not least check the bach and boat are ready to be used and abused by friends and family alike.

Please check our closing and opening dates below so you do have enough product over Christmas and New Year! *So from all of us at Nitrosol, here's to a cracker Christmas, and we will see you on the other side in the New Year.*

Love life and stay well!

Paul Whitty



NITROSOL CLOSURE OVER CHRISTMAS PERIOD



Nitrosol closes: **Friday 22nd December 2023**

And reopens: **Monday 8th January 2024**

The Nitrosol Team thanks you for your ongoing support in 2023

We hope you have a wonderful festive season with your loved ones and we will see you again in 2024

Cheers from the Nitrosol Team

Nitrosol EcoGro - Plants feeding Plants

What is Nitrosol EcoGro

Nitrosol EcoGro is a hydrolysed liquid, natural, plant-based fertiliser manufactured from vegetable protein plus trace elements and minerals with a balanced N.P.K of 11.5.9. In addition to feeding the plant directly, these organic materials feed and nurture the microbiological activity in the soil, increasing cycling, bacterial and fungal activity, and earthworm counts. This improves soil structure and increases nutrient cycling and consequently the availability of important soil nutrients, trace elements and minerals to plants.

Nitrosol EcoGro results include aiding with stress recovery, improved yield, fruit and produce quality and strong healthy plant growth.

Nitrosol EcoGro is a newly developed product, launched in 2022 and our tests show that it has the same efficacy as Nitrosol Original which has been around for over 50 years with it recognised and trusted brand name. Over this time Nitrosol has developed a strong following and reputation for supporting plant growth and soil health and profitability both in New Zealand and around the world.

Why use Nitrosol EcoGro

Nitrosol EcoGro will improve the nutritional value of pasture and fodder crops, with an improved balance between protein, fibre, and energy. Being a colloidal suspension, this enables convenient flexible and cost effective application via aerial, ground spray and irrigation systems, including hydroponics.

The new Nitrosol EcoGro process is used to convert plant protein, by dual hydrolysis, into plant available amino acids which have proven plant growth stimulating effects and, in addition, the amino acids act as effective chelating agents for trace minerals allowing nutrients to be carried into the foliage to stimulate natural growing processes. This is especially beneficial when soil conditions restrict nutrient uptake from the soil.

Pricing

20lt **\$232.00** • 100lt **\$718.00**

200lt **\$1,129.00** • 1000lt **\$5,247.00**

excluding GST and freight

Typical product analysis % W/V

Nitrogen-N	11%	Phosphorus-P	5%	Potassium-K	9%
Sulphur-S	1.4%	Calcium-Ca	1.3%	Magnesium -Mg	0.35%
Sodium-Na	0.01%	Manganese-Mn	323ppm	Zinc-Zn	230ppm
Copper-Cu	202ppm	Boron-B	223ppm	Molybdenum-Mo	182ppm
Cobalt- Co	24ppm	Selenium-Se	45ppm	Iron-Fe	313ppm



Nitrosol Product Range

NITROSOL ORIGINAL

Nitrosol Original hydrolysed meat blood and bone for use in all horticultural crops and home gardens. Nitrosol Original has a balanced NPK of 11.5.7 plus trace elements and minerals.

20lt **\$205.00** • 100lt **\$677.00**
200lt **\$1,063.00** • 1000lt **\$5,082.00**



NITROSOL OCEANIC

Nitrosol Oceanic is a liquid fertiliser manufactured from hydrolysed deep-sea fish blood and bone plus trace elements and minerals with a balanced NPK of 11.5.7.

20lt **\$212.00** • 100lt **\$688.00**
200lt **\$1,089.00** • 1000lt **\$5,197.00**



NITROSOL NITROGEN BOOSTER

Nitrogen Booster is a high nitrogen liquid formulation containing a balanced blend of nitrogen rich amino acids from hydrolysed plant protein plus urea to stabilise the amino acids. Nitrogen Booster has 21.5% nitrogen.

20lt **\$132.00** • 100lt **\$489.00**
200lt **\$747.00** • 1000lt **\$3,444.00**



NITROSOL MAGSULPHATE

includes 7.5% organic carbohydrates to feed and stimulate biological activity in the soil. Magnesium is an important plant nutrient that is often found to be deficient in New Zealand crops. Sulphur is essential for productive pastures, crops and animals.

200lt **\$330.00** • 1000lt **\$1,563.00**



NITROSOL MICROLIME

Nitrosol MicroLime is a finely ground high purity calcium carbonate used to increase pH or supply calcium. Certified Biagro organic input and IFOAM accredited.

25kg bag **\$19.25** • 1 tonne bag **\$693.00**



NITROSOL ORGANIC

is a new liquid organic fish fertiliser developed for use as a certified input for organic farmers. Silky smooth and not gluggy with a vastly improved odour. Certified Biagro organic input and IFOAM accredited. NPK of 6.1.3

20lt **\$220.00** • 100lt **\$699.00**
200lt **\$1,098.00** • 1000lt **\$5,255.00**



NITROSOL CALCIPRILL

is a 2-6 mm lime granule made from finely ground, high purity limestone. It is low in dust, easy to spread and breaks down rapidly in moisture.

25kg bag **\$25.00** • 500kg bag **\$325.00**



NITROSOL SEAWEED FLAKES

100% soluble seaweed flake derived from Ascophyllum Nodosum. Certified Biagro organic input and IFOAM accredited.

2kg pack **\$58.00** • 20kg box **\$529.00**



NITROSOL BLENDS

For ease of application and for an extra nitrogen boost, we can blend Nitrogen Booster with Nitrosol Oceanic or Nitrosol Original. Call us to discuss blending options and pricing.



NITROSOL GIBB A90

is a water soluble powder of gibberellic acid, a naturally occurring plant growth promotant. Apply at only 9gms per hectare.

540g tub **\$410.00**



Please note prices exclude GST & delivery, and are subject to change without notice. Purchase your products direct from Nitrosol Limited or your local rural merchant, eg: Farmlands, PGG Wrightson, Fruitfed, FarmSource, Horticulture etc.

DID YOU KNOW

Foliar Feeding

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The Nitrosol System - using foliar feeding to leverage off healthier soil biology.

There is endless debate comparing the benefits of foliar applied fertiliser with soil applied fertiliser. Plants absorb nutrients through both roots and foliage. This is irrefutable. Which mechanism is more effective depends on a great range of physical, environmental, and physiological factors at the time of application. These include plant species, stage of growth, weather conditions, soil conditions, type and form of nutrient, etc. It is not surprising that both sides of the debate can produce sound supporting evidence.

What Nitrosol products allow you to do, through the benefits of foliar feeding, is to feed key nutrients to your crop / pasture while letting your soil biology resume a more natural functioning state that plants have evolved to co-exist with over the millennia. By applying Nitrosol 'little and often', and withholding high analysis synthetic soil fertilisers, the bacterial and fungal populations in the soil can return to a natural ecological balance, where they are effective in fixing atmospheric nitrogen, nutrient cycling and releasing nutrients (PKS etc.) from unavailable mineral sources in the soil. There is no shortage of research demonstrating how the microorganisms in soil do this. Nitrogen fixing bacteria can fix up to 300 kg of N per hectare! But they won't do this when being fed urea because nitrogen fixing is an energy expensive exercise.

So why adopt this system? We have dairy farmers using Nitrosol, who, we estimate, are spending about 30% less on fertiliser while maintaining their production. The environmental outcomes for these farmers are outstanding since they are achieving this while applying only a fraction of the nutrients that are normally applied.

The Nitrosol formulation is rich in amino acids. These are derived from hydrolysed protein, an important process that breaks the protein down into the much smaller amino acid units. Amino acids can be directly taken up by the plant foliage and used in protein synthesis. This is highly efficient nutrient use. Amino acids have also been shown to improve healthy growth due to the stimulation of photosynthesis. The products of photosynthesis such as sugars are shunted down to the roots together with some amino acids, these stimulate the microorganisms in the soil, which in turn access more soil nutrients and make these available to the plants. The application of Nitrosol not only feeds the plants through foliage but some of the sprayed product also lands on the soil where it stimulates microbial activity directly.

What is important here is that the whole plant/soil biota cycle is stimulated and that is what makes the Nitrosol fertiliser system box far above its weight. It encourages the natural system to help itself instead of trying to turn the whole paddock into a giant artificial nutrient system, completely dependent on synthetic inputs.

Nitrosol is not a 'cure-all'. The quantity of nutrient leaving the farm at harvest, in the milk tanker and through leaching needs to be replaced. Regular soil and foliage testing should be done to monitor nutrient levels. However, what we see is that there is an untapped, and in some cases an enormous, nutrient reservoir in many soils, and the atmosphere in the case of N which can be tapped into if your soil's biological health is restored. This can be done while still feeding your plants with foliar applications of Nitrosol.

The benefits of foliar applied fertilisers.

- Faster response after application especially if deficiencies are present.
- Lower levels required to alleviate deficiencies. (this is where the 1 to 10 ratio etc, becomes most relevant)
- Little added more often results in less loss to runoff or leaching etc.
- Lower chance of over fertilising and causing soil imbalances.
- Trace minerals can be added and applied evenly, as it is challenging to incorporate trace minerals evenly into solid fertilisers as physical differences can result in separation and uneven application.



While your soil performs naturally!

Power to the Ground

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The last laugh...

Simplified Urine Test

Go outside and pee in the garden.

If ants gather: **Diabetes**

If you pee on your feet: **Prostate**

If it smells like a BBQ: **Cholesterol**

If when you shake it, your wrist hurts: **Osteoarthritis**

If you return to your room with your penis outside your pants: **Alzheimer**



You've gotta love Frank

Mildred the church gossip and self appointed monitor of the churches morals, keeps sticking her nose into other people's business. Several members did not approve of her extracurricular activities but feared her enough to maintain their silence. She made a mistake, however, when she accused Frank, a new member of being an alcoholic after she saw his old pickup parked in front of the town's only bar one afternoon. She emphatically told Frank and several others that everyone seeing it there would know what he was doing.

Frank, being a man of few words, stared at her for a moment and turned, then walked away. He didn't explain, defend or deny. He said nothing. Later that evening Frank quietly parked his pickup in front of Mildred's house and walked home. He left it there all night!



Credit card payments



Visa / MasterCard only

Nitrosol Ltd has the facility to accept Credit Card payments. Please contact us on **0800 80 30 60** and we will be happy to explain the procedure.

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We're excited to bring you special offers, industry news, and relevant information on our social media platforms.



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Nitrosol[®]
Biological Fertilisers



Plant-based Nitrosol Green

TRIAL INFO / technical / images ...

WHY USE NITROSOL GREEN?

Nitrosol Green uses modern technology to process natural vegetable protein and convert it into **water soluble amino acids**. Amino acids are known to stimulate plant activity besides being a good source of nitrogen in a form readily available to crops. This enables convenient flexible and cost-effective application via aircraft, ground spray or irrigation systems, including hydroponics.

Nitrosol Green results include aiding with stress recovery, improved yield, fruit and produce quality, strong healthy plant growth.

While your soil performs naturally!

INTRODUCING AN IMPROVED NITROSOL RANGE

SO WHAT'S NITROSOL GREEN?

Nitrosol Green is a liquid fertiliser manufactured from **vegetable protein** plus trace elements and minerals with a balanced N.P.K of 11.5.7. These organic materials feed and nurture the micro-biological activity in the soil, increasing cycling, bacterial and fungal activity, and earthworm counts. This improves soil structure and increases the availability of important soil nutrients, trace elements and minerals to the plants.

Results include aiding with stress recovery, improved yield, fruit and produce quality and strong healthy plant growth.

Nitrosol Green is a newly developed product launched in 2022. Our tests show that it has the same efficacy as Nitrosol Original that has been around for over 50 years and has a highly recognisable and trusted brand name. Over this time Nitrosol Original has developed a strong following and reputation for supporting plant growth, soil health and profitability both in New Zealand and around the world.

Nitrosol Garden Range

NEW look & range • same great product • superb results!

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Not only do we supply the agricultural, sheep and beef, and dairy industries, but Nitrosol has developed a range of products specifically for the home gardener.

Article as seen in the latest Kiwi Gardener magazine, December 2022 (on sale from 21 November 2022):

Nitrosol's core philosophy is to use the power of nature. We do this by providing efficient fertiliser application through foliar feeding as well as essential nutrients for healthy soil.

A PRODUCT FOR ALL YOUR NEEDS

It can be a daunting task for gardeners faced with a myriad of fertiliser products on shelf as to which is the best fertiliser to use. With a key principle of "keeping it simple", our new look garden range is just that; superior all-purpose fertilisers that work for any application. The choice is in the source of nutrients, whether it be for whole garden, flowers, shrubs, trees, lawn, fruit or vegetables.

Tried, true and proven- general broad spectrum Nitrosol Blood & Bone and Nitrosol Oceanic have been used for decades successfully in professional nurseries, greenhouses and home gardens. Nitrosol Green is a brand-new product and is made from plant-based amino acids. Whilst Nitrosol Green will work just as well as Blood & Bone and Oceanic

for the rest of your garden, it is especially formulated for houseplants, fruit and vegetables. However, Nitrosol Green contains absolutely NO animal by-products.

This gives the avid gardener three choices: a meat blood and bone, a fish blood and bone or a plant-based nutrient fertiliser. Furthermore, Nitrosol's time honoured Tomato fertiliser includes increased potassium for sweet and succulent tomatoes. And now Nitrosol's strong Seaweed Tonic, the ideal energy booster with all of Nitrosols' fertilisers.

KEY BENEFITS

- Through foliar feeding, the natural source of nutrients and micro-nutrients feed plants directly, nurturing the beneficial microbes and earthworms in the soil. The result? Healthier plants, vibrant blooms, rich, leafy foliage and delicious fruit and veges
- Cost effective and convenient, you don't need 20 fertiliser products in your shed

- Foliar feeding with amino acid complex for rapid uptake and quick response
- Naturally occurring amino acids effectively stimulate the uptake of nutrients by the plant and also help plants to recover from stress caused by too much, or too little, heat, light and water, or even stress from chemical sprays or transplanting. These have been shown to increase growth rates and yields of a wide range of crops, stimulate production of the sugars and increase the availability of essential nitrogen to the plant
- Great for the environment with no waste.

USED BY THE PROFESSIONALS

Nitrosol is used by horticulturalists for propagation, including seeding, layering, and cutting, grafting, and budding and even tissue culture methods. In professional nurseries, Nitrosol can be used for routine nutrient supply by drip irrigation or foliar fertigation.

SUSTAINABILITY

Nitrosol prides itself on using sustainable, natural resources for all products.

IT WORKS NATURALLY

As a foliar feed, Nitrosol has the unique advantage over solid fertiliser in that it can be applied to the foliage and rapidly absorbed directly into the plant and soil, carrying essential elements, micro-nutrients and amino acids to where they are needed most. Extensive use in agriculture and horticulture has proven its effectiveness.

100% NZ MADE

Nitrosol has an active programme for continuous improvement resulting in even easier application, increased efficacy and nutrient value in its formulations. An important step in being able to launch this exciting new garden range.

To see our Stockist List, go to our website Gardens and Nurseries page (under Our Products).



A banner for Nitrosol Biological Fertilisers. The background is a festive Christmas scene with green pine branches, red holly berries, and white snow. The text is centered on a white rectangular background.

Nitrosol[®]

Biological Fertilisers

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Application Rates by Product

Nitrosol[®]
Biological Fertilisers



Power to the Ground



Nitrosol Nitrogen Booster

NITROSOL NITROGEN BOOSTER, A SUCCESS STORY

We have pushed hard to keep up with Nitrogen Booster, as the demand has increased many fold. A good challenge to have. Many pastoral and horticultural customers have seen the benefits first hand of using Nitrogen Booster as an alternative for urea!

What they are realising is that it's not all about the theoretical level of "N". Urea has more "N" than Nitrogen Booster however a large portion of urea "N" can be lost through leaching and volatilisation (conversion to CO2 and ammonia gas) especially when added as a solid at high doses.

The little and often approach using foliar applied Nitrogen Booster gives fast availability and reduced waste as well as stimulation of nitrogen fixing from the atmosphere which is sustainable and cost effective.

WHAT IS NITROSOL NITROGEN BOOSTER?

Nitrosol Nitrogen Booster is a liquid source of nitrogen which is the fundamental element in plant biology. The nitrogen cycle is one of the main drivers in soil activity and plant growth.

Nitrosol Nitrogen Booster is a carefully balanced blend of nitrogen rich materials including natural amino acids to ensure maximum nitrogen uptake by the plant. There is increasing awareness of excessive amounts of nitrate (NO3 -) entering either ground or surface water often associated with application of solid high concentration fertilisers like urea.

The amino acids are known to give fast and effective uptake during foliar feeding. Some of the Nitrogen Booster is absorbed by the soil and taken up directly by the roots. The rest is utilised by micro-organisms in the soil which in turn provide nutrients to the plant. This gives a twin benefit of both fast and slower acting nitrogen sources. One by rapid foliar absorption and two by soil storage.

Nitrosol Nitrogen Booster also contains carbohydrates, a low level of potassium and phosphorus, as well as a significant amount of magnesium, all of which help to stimulate photosynthesis - the driving force of growth in nature.

ANALYSIS				
N%	P%	K%	Mg%	S%
21.5	.6	.8	.7	1

APPLICATION RATES

Typical Dairy Pasture Application:

20 Litres /Ha with 100 Litres/Ha of water as pasture or soil application. If applied directly to soil prior to cultivation via fertigation and irrigation systems, higher dilution rates than above can be used.

Typical Beef/Sheep Pasture Application:

20 Litres /Ha with 100 Litres/Ha of water as soil or pasture application. If applied directly to soil prior to cultivation via fertigation and irrigation systems, higher dilution rates than above can be used.

Typical Foliar Application:

1: 100 litres of water. Typical Fertigation: Apply 5 – 15 Litre/Ha with 200 to 400 Litres/Ha water toward the end of irrigation shift to flush the irrigation system out with clean water including all mainlines, sub-mains and internal delivery system.

HOW DOES IT WORK SO WELL?

Nitrosol Nitrogen Booster is taken up directly by the plant foliage which eliminates substantial loss encountered with solid urea use. Solid urea loses nitrogen to the atmosphere and to water via leaching.

Using a smaller amount of Nitrogen in a liquid form is a more efficient way.

The effect of nutrients applied and absorbed through the foliage is far greater than nutrients applied to the soil

