

Nitrosol Nitrogen Booster Fact File

Nitrosol
Biological Fertilisers

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 plant based amino acids to ensure maximum nitrogen uptake by the plant. There is increasing awareness of excessive amounts of nitrate (NO_3^-) entering either ground or surface water often associated with solid application that is urea.

The plant-based nitrogen is known to give fast and effective uptake during foliar feeding. Some of the plant-based nitrogen is also absorbed by the soil and broken down naturally by microorganisms to produce a form of nitrogen readily absorbed by the roots. This gives a twin benefit of both fast and slower acting nitrogen sources. One by rapid foliar absorption and two by soil storage.

Plants deficient in nitrogen have thin, spindly stems and their growth is stunted. Their older leaves turn yellowish-green from nitrogen starvation (chlorosis), while newer leaves are supplied with the available, but limited nitrogen.

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

Why use Nitrosol Nitrogen Booster

- It is a nitrogen boost for soil, crops and pasture.
- Improves pasture quality.
- Plant based nitrogen can increase root density by 45% - 60% compared with urea (good for long term growth)
- Plant based nitrogen stimulates biological activity.
- Plant based nitrogen also provides longer and more sustainable nitrogen availability.
- The combination of nitrogen and amino acids are known to be synergistic and readily absorbed through foliar feeding.
- Nitrogen foliar application provides more rapid and efficient absorption than solid nitrogen applied via the soil.
- Excess urea can cause nitrogen loss through leaching (more porous soils result in higher leaching).
- Applying solid urea to the ground can result in high losses of nitrogen, especially in warm weather through volatilisation.
- Conversion and uptake of a soil applied solid urea is limited by the soil type and pH, micro-organism levels, temperature and water levels.
- Excess nitrogen over stimulates soil bacteria leading to a lower carbon to nitrogen ratio.

about Nitrosol

Nitrosol is a one-step colloidal liquid suspension organic based fertiliser containing:

- A balanced NPK 11.5.7. to feed through both foliage and roots.
- A balanced formulation of trace elements and minerals to address deficiencies and imbalances.
- Organic matter including protein, amino acids, albumin, globulin and cholesterol to feed and nurture the biological activity in the soil.
- A naturally occurring growth promotant stimulates plants to take up and use all the available nutrients, trace elements and minerals.

Nitrosol Original

Made from ovine (sheep) blood and bone, Nitrosol Original has been widely used since 1971. It has gained an enviable reputation for producing strong, healthy, disease resistance plants as well as top quality flowers, fruit and vegetables.

NPK 11.5.7

Nitrosol Oceanic

Nitrosol Oceanic is made from organic matter sourced from deep-sea fishing operations. It is ideal for use on pastoral grazing land with no stock withholding period, and in horticulture. Nitrosol Oceanic has the same typical analysis and will produce the similar results to Nitrosol Original.

NPK 11.5.7

Nitrosol Organic

Nitrosol Organic has been certified by BioGro Ltd for permitted use in agriculture and horticulture by certified organic growers. With a higher organic content, it will help to produce healthy biologically active soil as well as highly nutritious and flavoursome fruit, vegetables and healthy nutritious feed for grazing animals.

NPK 6.1.3

Telephone 0800 80 30 60 for more information

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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.

Urea Comparison

Comparing foliar application of biological N (i.e. amino acids) with soil applied urea N is **not** comparing apples with apples.

i.e. 1kg of Nitrosol N does not equal 1 kg of urea N.

Renown plant researchers Dr H.B. Tukey & S.H. Wittwer (Michigan State University) found foliar feeding provided about 95 percent efficiency of use compared to about 10 percent of use from soil applications. Numerous trials and research papers demonstrate that under certain conditions foliar applications can be many times more effective than soil applications. See www.nitrosol.co.nz for reference to these.

On this basis the approximate comparison would be as follows:

Nitrosol Nitrogen Booster @ 5L per Ha (1.33 kg N)= 30kgs of Urea (13 kg N)

Nitrosol Nitrogen Booster @ 10L per Ha (2.7 kg N)= 60kgs of Urea (28 kg N)

Nitrosol Nitrogen Booster @ 15L per Ha(4.0 kg N) = 90kgs of Urea (40 kg N)

Nitrosol Nitrogen Booster @ 20L per Ha(5.4 kg N) = 120kgs of Urea (54 kg N)

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.

did you know?

Nitrosol has a specific gravity of about 1.26 so one litre weighs 1.26 kgs.

Because Nitrosol is a colloidal suspension containing organic material, it will not leach or wash away even under heavy rain or irrigation.

Nitrosol feeds via both the foliage and roots meaning that it can be applied directly to plants and the surrounding soil with excellent results.

The natural growth promotant in Nitrosol helps plants to use the available nitrogen more efficiently with less waste.

The growth promotant encourages cell division and stimulates production of plant sugars.

Nitrosol acts as an effective sticker and spreader and may help to improve the effectiveness of plant protection materials when they are applied together.

Nitrosol is widely accepted as an important part of integrated fertiliser programmes to improve soil sustainability.

Nitrosol is exported from New Zealand to Europe, Asia, Bangladesh, Canada, USA, South Africa, Australia and several South Pacific Islands.

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