

fact file: apples

Product: Nitrosol

Application to apples

Foliage

Spray a 1:200 dilution to the drip point on a 7 - 10 day cycle during periods of rapid growth or fruit development and at intervals of up to four weeks at other times. Alternatively, spray 5 - 10 litres per hectare at 21 - 28 day intervals. Always add Nitrosol as the last ingredient to the spray tank ensuring it is thoroughly mixed before use. Application may be combined with plant insect pest and disease protection materials, but be sure to check for compatibility first. When used in conjunction with other materials Nitrosol acts as an effective sticker and spreader, reducing surface tension on the leaf and helping attachment to the foliage.

Application is recommended immediately after a stress event, such as an untimely frost, too much or too little water, a nutrient deficiency, or transplanting, where Nitrosol is particularly effective in stress recovery and maintenance of calcium levels.

A season end post harvest application of 10 litres per hectare is recommended prior to defoliation to help the trees to store nutrients in the roots and improve bud burst in the following spring.

Soil

Apply 10 - 20 litres per hectare (6 - 10 litres per acre) 1 - 3 times per year in spring and/or autumn, in a convenient amount of water to ensure coverage. May be banded and combined with application of herbicide materials. Add Nitrosol to the spray tank as the last ingredient when combining with other materials and while filling with water to ensure adequate mixing. When combined with herbicides, Nitrosol acts to stimulate a more rapid uptake in to the target plants and the organic content is contributing to the biological activity in the soil.

Dilution

For application to apple trees the desired rate of dilution with water is 1:200. This may be varied down to 1:100 safely, to co-ordinate with the volume of total spray applied per hectare. For application to soil, the dilution can be varied to suit the vehicle speed, swath width and spray rate of the application equipment. Grounds spray equipment may use a dilution anywhere between 1:10 and 1:50. To ensure adequate mixing, add Nitrosol to the tank whilst filling with water.

Irrigation or fertigation systems

Warning: Nitrosol is a colloidal liquid suspension that has been screened through 60 mesh. It may contain particles with a maximum possible size of 250 microns that could block fine drippers. If used in fertigation systems be sure to flush systems well, after using Nitrosol. A 1:200 dilution may be applied at 7 - 10 day intervals. Nitrosol diluted to 1:200 with water will yield a CF (conductivity factor) of approximately 20.

Specific trace element deficiencies

Where observation or foliar analysis identifies a specific deficiency within a crop, the deficient element may be supplemented by the addition of small quantities of the relatively inexpensive forms. For example, calcium chloride for a calcium deficiency, 'Solubor' or 'Timbor' for a boron deficiency, zinc sulphate for zinc deficiency etc. In this situation, Nitrosol acts as the carrier to chelate and convey the additional trace element effectively into the deficient trees to restore the balance of nutrients.

Important user information

- ☐ Nitrosol may settle in its containers over time. **Contents should be agitated before using.** ☐
 - ☐ This is achieved by rolling the 200 litre drums back and forth several times on a flat surface.
- ☐ To decant, place the 200 litre drum on its side with the bung at the 12 o'clock position. ☐
 - ☐ Open the bung and pour into a bucket or pail, moving the drum along as the level reduces.
- ☐ Nitrosol should be stored away from extremes of temperature as the material may expand ☐
 - ☐ with heat and cause leakage. Storage in very cold conditions may possibly cause formation ☐
 - ☐ of crystals. Where this is suspected to have occurred, be sure to strain the material as it is ☐
 - ☐ added to the spray tank.
- ☐ Do not store product that has been mixed with water, as it will not
- ☐ Nitrosol is harmless to birds, bees and animals when used as

Nitrosol®
Original
Nitrosol®
Oceanic
Nitrosol®
Organic

about nitrosol

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

- A balanced NPK (8.3.6.) 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.
- Two naturally occurring growth promotants gibberellins and triacontanol to stimulate 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.

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 similar results to Nitrosol Original.

nitrosol organic

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

PHLOLIME™

about phloline

PhloLime sprayable rapid action lime will help to sweeten the soil adding calcium, one of the most important minerals for healthy soil, plants, animals and humans. PhloLime contains 98% calcium carbonate on a dry matter basis. With an average particle size of only 9 microns, PhloLime will move into the soil profile rapidly where it can begin to raise the pH. It can also be applied in conjunction with Nitrosol. ■■■■■■

Telephone 0800 80 30 60 for more information

CONTINUED OVERLEAF



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PRODUCT: NITROSOL

(continued)

Typical analysis (elemental w/w)

Nitrogen - N	8%	Manganese - Mn	193 ppm
Phosphorus - P	3%	Zinc - Zn	67 ppm
Potassium - K	6%	Copper - Cu	90 ppm
Sulphur - S	1.7%	Boron - B	192 ppm
Calcium - Ca	1.3%	Molybdenum - Mo	119 ppm
Magnesium - Mg	0.2%	Cobalt - Co	10 ppm
Sodium - Na	0.3%	Selenium - Se	60 ppm
Iron - Fe	883 ppm	Gibberellins	0.01 ppm

Plus Triacontanol (Tria) growth promotant and organic material

Gibberellins - GA

GA is widely distributed in flowering plants and is shown as C₁₉H₂₂O₆. It is often used by horticulturists on its own, to assist with the development and improvement of specific aspects of growing, for example stimulation of flowering, and fruit quality improvements. As a contribution to the efficacy of Nitrosol, its broad action is to aid in the growth of cell size and to stimulate the plant to take up and use the available nutrients.

Triacontanol - Tria

Tria is a 30 carbon straight-chain fatty alcohol and occurs in certain waxes and the foliage of some plants. It is shown as CH₃(CH₂)₂₈CH₂O. Its effects on stimulating plant growth and crop yields, by increasing the growth in the number of cells, have been studied extensively in China, India, Japan and the USA. Tria has been shown to have beneficial effects towards improving the quality of fruit and flowers, in fruiting and flowering plants as well as enhancing plant health, vigour and root development. It has been demonstrated to stimulate photosynthesis within seven minutes of application. Tria is known to promote development of carbohydrates (sugars and energy) in plants. It will help stress recovery after adverse weather conditions, transplanting or application of a selective herbicide.

What will Nitrosol achieve for apples

- Promotion of a strong, hardy and compact growth habit.
- Helps to produce healthy trees that become more resistant to attack from insect pests or disease. This can result in a reduced need for application of plant protection materials.
- Healthy trees will produce yields closer to their potential.
- Expect better fruit quality and size with improved calcium levels, resulting in sweeter and better tasting fruit that will have a longer shelf life. Better quality means higher returns.
- Improved organic activity in the soil, evidenced by increased earthworm numbers. This leads to improved soil structure and aeration, better drainage, more drought resistance and the release of locked up nutrients.
- Rapid recovery for trees stressed by adverse weather conditions such as untimely frosts.
- Maximise the cost effectiveness of fertiliser inputs to feed crops on 'a little and often' basis to provide ongoing and balanced growth stimulus.
- It can more effectively address mineral and trace element imbalances and deficiencies because it is a liquid.
- Mixed with a herbicide, Nitrosol will stimulate a quicker uptake into the target plants and help to accelerate the 'kill.' At the same time Nitrosol is helping to increase the biological activity in the soil and that will improve the balance and availability of nutrients.
- Acts as an effective sticker and spreader when applying plant protection materials

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Organic

did you know?

Nitrosol has a **specific gravity** of about 1.24 so one litre weighs 1.24 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 promotants, Gibberellins and Triacontanol** in Nitrosol help plants to use the available nitrogen more efficiently with less waste.

Gibberellins act to stimulate the growth of individual cells.

Triacontanol 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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