fact file: vegetable crops

PRODUCT NITROSOL

Nitrosol Original
Nitrosol Oceanic
Nitrosol Organic

Application to beans, brassicas, capsicums, carrots, chilli peppers, cucurbits, herbs, kumera, lettuce, peas, potatoes, pumpkin, squash, tomatoes, etc

Mix Nitrosol with water as a 1:200 dilution (5 ml per litre of water) and use as the watering fluid weekly, or add to the spray tank as the last ingredient, in conjunction with crop protection materials, and spray to the drip point. Alternatively, apply 2 - 8 litres per hectare in conjunction with each application of plant protection or disease control materials. When mixing with other materials be sure to check for compatability first and add Nitrosol to the spray tank as the last ingredient.

Irrigation or fertigation systems

As a booster, add Nitrosol to the liquid feed concentrate tank at the rate of 1 litre of Nitrosol per 200 litres of soluble salts concentrate. It may also be used as the primary source of nutrients in liquid feed systems. Nitrosol diluted to 1:200 with water will yield a CF (conductivity factor) of approximately 20. Note: Nitrosol is a colloidal liquid suspension that has been screened through 60 mesh, and therefore it contains finely ground particles up to 250 microns, that could block fine drippers. It is recommended that filters be checked and cleaned regularly and fertigation lines be flushed with plenty of water, after using Nitrosol.

Specific trace element deficiencies

Where observation or foliar analysis identifies a specific nutrient or trace element deficiency, the deficient element may be supplemented by the addition of small quantities of the relatively inexpensive sulphate form. For example, copper sulphate for a copper 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 deficient trace element effectively into the affected plant.

Important user information

- Nitrosol may settle in its container over time. Contents should be agitated before using. This is best accomplished by rolling the 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 sideways as the level reduces.
- Ask us about the 'Ugly Pump' that uses water pressure from your tank filling hose to pump Nitrosol or PhloLime directly from a 200 litre drum or 125 litre barrel, into the spray tank.
- 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 cause the formation of crystals. Where this is suspected to have occurred, be sure to strain the material as it is added into the spray tank.
- Do not store product that has been mixed with water, as it will not keep.
- Nitrosol is harmless to birds, bees and animals when used as directed.
- Notice: Nitrosol Original may not be fed to sheep, cattle, deer, alpacas, goats or other ruminant animals in accordance with the ruminant feed ban regulations.

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 organic activity in the soil.
- Two naturally occurring growth promotants 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 material 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 same results as Nitrosol Original.

nitrosol organic

Nitrosol Organic, with an NPK of 3.3.6., has been certified by Bio-Gro for 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 and vegetables. It will also help to produce healthy feed for grazing animals.

PHLOLIME™

about phlolime

PhloLime sprayable rapid action lime will help to raise the pH and 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 5 microns, PhloLime will move into the soil profile rapidly where it can begin to raise the pH. It can be applied in conjunction with Nitrosol.

CONTINUED OVERLEAF

fact file: vegetable crops

PRODUCT NITROSOL

(continued)

Nitrosol Original
Nitrosol Oceanic
Nitrosol Organic

Typical analysis (elemental w/w) of Original & Oceanic

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 $C_{19}H_{22}O_6$. 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 $CH_3(CH_2)_{28}CH_2O$. 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 United States. 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 Nitrosol will achieve for vegetables

- Supplies crops with the right combination of nutrients at a rate appropriate to the plant's need.
- Combines with plant protection or herbicide materials where it acts as an effective sticker and spreader to achieve better and more efficient application.
- Helps to produce vibrant healthy plants with good colour and strong root development. They become more resistant to attack from insect pests or disease often resulting in a reduced need for application of plant protection materials.
- Provides an 'organic' input where plants are grown in either soil or a 'non-soil' medium resulting in better quality, better tasting fruit and vegetables with a longer shelf life.
- Rapid recovery for plants stressed by transplanting or adverse weather conditions.
- Maximise the cost effectiveness of fertiliser inputs to feed plants on the basis of 'a little and often' to provide ongoing and balanced growth stimulus.
- The two natural growth promotants will stimulate plants to take up and use all available nutrients.
- It can more effectively address mineral and trace element imbalances and deficiencies because it is a liquid.
- Substantial freight and application cost savings because Nitrosol is shipped in a highly concentrated form, adding water as the carrier at the point of application.

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 foliage and roots meaning that it can be applied directly to plants and the surrounding soil with excellent results.
- The natural growth promotants in Nitrosol help plants to use the available nitrogen more efficiently with less waste.
- 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, North America, Australia and South Pacific Islands.