

NUCLEON

Nucleon is a liquid enzyme additive developed for use with liquid fertilisers or as a stand-alone product. Nucleon enhances the nutrient availability to soil microbes and broad nutrient acquisition by plant roots resulting in improvements in soil and plant health, growth and yield.

Nucleon is a blend of two enzymes in a concentrated liquid formulation that once soil applied, triggers literally trillions of constant catalyst reactions. The enzyme lipase converts lipids present in the soil organic matter to release bio-available nutrients and water for the plant while stimulating native microbial soil activity. The mannanase enzyme converts exudates around the outer layers of the root tip creating soil conditions ideal for plant root growth.

Nucleon is suitable for use on all horticultural crops and sugarcane, both dryland and irrigated, where liquid soil fertiliser application practices are utilised. Nucleon is well suited for use at planting and side-dressing, to enhance growth through critical growth and nutrient demand periods. Multiple applications can be used. In summary, Nucleon provides the right amount of enzyme right where you need it and when you need it most, enhancing the utilisation of applied fertilisers while continually working and releasing nutrients from soil organic matter and residues.

THE ADDITIONAL POWER OF 2 ENZYMES IN NUCLEON

Lipase	Mannanase	Product Offer
<ul style="list-style-type: none"> • Converts lipids within organic matter into soil available nutrients for plant root uptake • Increases natural soil microbial based activity • Improves soil health 	<ul style="list-style-type: none"> • Breaks down exudates around outer layer of root tips • Creates soil conditions ideal for plant root growth • Allows the plant to uptake more water and plant available nutrients (that the lipase enzymes aided in providing) 	<ul style="list-style-type: none"> • Stand alone enzyme additive for mixing in solution with soluble fertilisers • Dilute concentrate commercial formulation packed ready for use

Directions for Use

- Store optimally at ambient temperature. Under these conditions Nucleon has a shelf life of 24 months.
- Shake well before using.
- Add Nucleon after all other inputs (fertiliser, micronutrients, etc.) have been added to the tank.

In-furrow Application:

- Apply Nucleon as an in-furrow spray in 30 L - 140 L/ha of water/starter fertiliser at planting.

Recommended application timings:

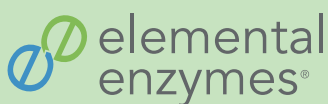
CROP(S)	APPLICATION TIMING:	RATE:
Horticultural Crops	At planting, in-furrow with starter fertiliser or water (or both)	50 – 75mL/ha
	Vegetative stages through dripline application with fertiliser or water (or both)	50 – 75mL/ha
	Nursery application to container grown seedlings, cuttings and transplants	40mL/100L
	For side-dressing when applied within 15cm of the plants	50 – 75mL/ha
Sugarcane (plant and ratoon)	Apply at planting or on ratoon cane when stool splitting occurs to apply nutrition	25mL/ha

Compatibility:

Check chemical mixture compatibility using a jar test using all products in proper proportion to establish physical compatibility prior to application.

Nucleon is non-phytotoxic and compatible with many commonly used in-furrow treatments including insecticides, pesticides, fungicides, micronutrients, and bio-stimulants. Avoid mixing Nucleon with chelating agents or acidic nitrate fertilisers as they may deactivate the contained enzymes. Pilot testing compatibility of all chemical mixes is recommended.

The information provided in this Info Sheet is an extract and does not constitute the full Directions for Use. PLEASE READ THE PRODUCT LABEL THOROUGHLY BEFORE USE. NUCLEON™ trademark pending of Elemental Enzymes Australia Pty Ltd.



Elemental Enzymes®, founded in 2011 and based in St Louis, USA is a life sciences company that creates novel enzyme, peptide and natural solutions that improve soil health, plant health, performance and yield. Our technology and product solutions are applied through seed treatment, foliar applications, tree injection, in-furrow soil treatments, fertiliser coating and fertigation.

Elemental Soil Enzymes

Think of them as factories for your soil, able to continuously produce the desired nutrient for a number of weeks.

Enzyme Definition

A protein produced by a living organism that acts as a catalyst to bring about a specific biochemical reaction.

What We Do

All of our soil enzyme products perform chemical reactions with the same enzymes that are naturally secreted by plants and/or microbes to do the tasks we want them to do, i.e. degrade soil-borne complex molecules into smaller, easier absorbable/digestible molecules.

We just supply them readily, in a higher concentration and more widely distributed throughout the rhizosphere than what microbes and/or the plant root can achieve on their own.

Priming The Soil

Soil enzymes are applied with fertiliser at planting time. Enzymes get to work immediately, quickly and continuously for a number of weeks creating their specific chemical reactions. The enzymes release and make available nutrients in the area near the seed important to growth. The seed germinates into a rich area of nutrients resulting in better seed emergence and establishment.



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