



Magno is a granular enzyme additive developed for use with liquid or soluble fertilisers or as a stand-alone product. Magno modulates nutrient flow and improves phosphate uptake by converting unavailable forms of organic phosphate into plant-accessible forms.

Magno contains a blend of two enzymes in a dry granular formulation that, once soil applied, triggers literally trillions of constant catalytic reactions. The enzyme **phosphatase** works in all crops by creating more efficient utilisation of applied phosphate in fertiliser and releasing unavailable phosphate tied up in the soil's organic phosphorus bank. The enzyme **mannanase** converts exudates around the outer layers of the root tip, creating soil conditions ideal for plant root growth.

Magno is suitable for use on all vegetable, sugarcane, and tree crops where soluble fertilisers are applied via drip irrigation, and the product can be mixed in the tank prior to application.

In summary, Magno 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 to release nutrients from soil organic matter and residues.

**Enzyme mixture highly suited for horticulture uses.
Designed for mixing with dry soluble fertilisers for use in fertigation.**

THE ADDITIONAL POWER OF 2 ENZYMES

Mannanase	Phosphatase	Product offer
• Breaks down exudates around outer layer of root tips • Modulates flow of water and plant available nutrients • Creates soil conditions ideal for plant growth	• Releases phosphorus from organic phosphates in the soil • Ensures better utilisation of applied phosphorus fertiliser • Starts to work immediately after added to moist soil	• Apply mixed with compound NPK soluble fertilisers • Apply at planting in-furrow, through drip lines and irrigation systems • Packaged in an easy to use foil bag

Directions for use

- Magno is for soil application only.
- Magno is designed for use on all soil types.
- Magno can be applied to dry soil if planting dry and will be available when the seed germinates.

Situation	Use Pattern	Rate	Critical Comments
Horticultural crops	At planting, in-furrow with starter fertiliser or water (or both) for all horticultural crops	15–50 g/ha	Apply as a total in-furrow spray volume of 30 L–140 L/ha using fertiliser and/or water carrier. Refer to mixing and compatibility statements for order of mixing.
	Vegetative stages through dripline application with fertiliser or water (or both) for all horticultural crops	15–50 g/ha	Dilute in sufficient application volume to apply through rip or micro-sprinkler irrigation. Apply a sufficient quantity of irrigation to extent product through the root zone. Refer to mixing and compatibility statements for order of mixing.
	For side-dressing when applied within 15 cm of the plants	15–50 g/ha	When side-dressing apply with liquid fertiliser solution in spray volume of 30 L–140 L/ha. Refer to mixing and compatibility statements for order of mixing.
Sugarcane	Both plant and ratoon	10–20 g/ha	Apply at planting or on ratoon cane when stool splitting occurs to apply nutrition. Apply in a spray volume of 50–300 L/ha.

Mixing and compatibility:

Check chemical mixture compatibility using a jar test using all products in proper proportion to establish physical compatibility prior to application. This product is non-phytotoxic and compatible with many commonly used in-furrow treatments including fertilisers, insecticides, pesticides, fungicides, micronutrients and bio-stimulants.

Can be mixed with most NPK fertilisers with a pH between 5.0 and 9.0 as well as water carrier solution. Half fill mix tank with water and begin agitation. Add products in this order, mixing thoroughly after each addition: pesticides, fertilisers, Magno and finally adjuvants. Fill tank with remainder of water and continue agitation until solution is completely mixed.

Prior to the addition of Magno to the spray tank, it is preferable to pre-dissolve using the following instructions. Fill a bottle or jug with approximately 1 litre of water for every hectare to be treated. Add pre-weighed Magno at the suggested use rate. Close the container and shake thoroughly for 15 seconds; allow the solution to rest for 1 minute and then mix again. Repeat mixing and resting until Magno is fully dissolved.

Product use:

Apply Magno in the root zone of crops where it will act to release sugars from mucilage secreted by root tips as well as plant available orthophosphate from soil borne organic phosphates. The combined activity enhances nutrient uptake by the plant and increases microbial activity around the roots.



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. convert 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.