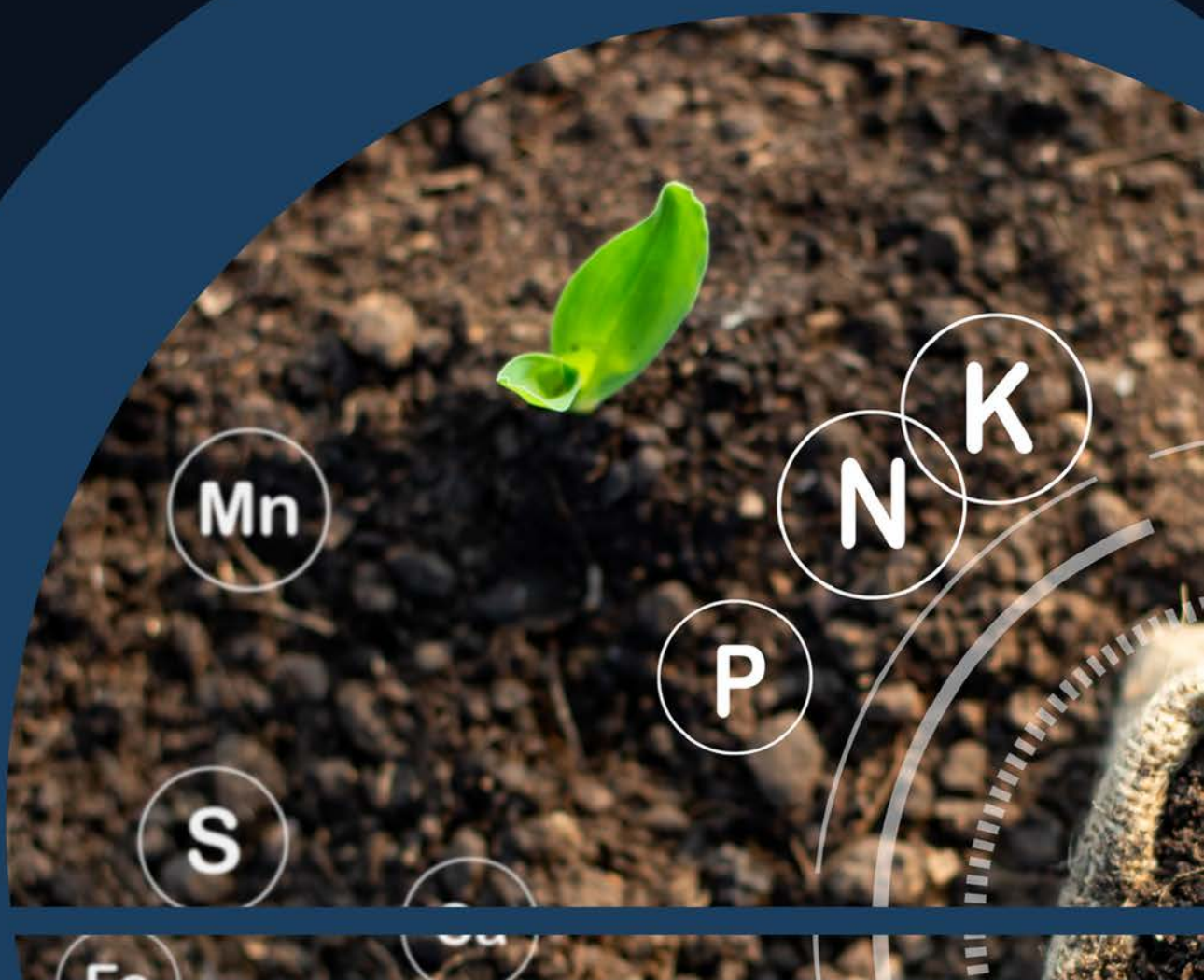


CROP NUTRITION

SEPTEMBER 2022



1300 621 055
www.innovakalien.com.au



ABOUT US

Innovakalien has more than 30 years' experience manufacturing and supplying chemical markets across Australia.

Innovakalien represents the next step forward in manufacturing, storage and supply of chemicals to most industries. We value **Precision, Excellence and Quality** because doing the right job in the right way at the right time ensures we create products and services we are proud of.

An established network allows us to supply anywhere in Australia rapidly, safely and economically, with the confidence to exceed our clients' expectation through our range of products and services.

At our core is a customer focused team of professionals, dedicated in their fields and pursuit, to ensure Innovakalien is backed by the knowledge and experience to see us exceed yours and our potential.

"Our focus is on providing exceptional results in the shortest amount of time possible. Embracing trends and sustainability practices and changing the world."

Our Crop Nutrition Range

Innovakalien is passionate about assisting growers to reach their full cropping potential. We are a supplier of bio stimulants including humates, fulvates and seaweed products. Our product range also includes macro and trace element fertilizers, for soil or foliar application to maximize growth potential.

Our Horticultural product and service philosophy is based around sustainable business practices with an emphasis on optimizing the physical, chemical and biological properties of soils for long term soil health and productivity. Our product range reflects this, and we are committed to continual development of new products which are in line with the company philosophy.

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Enhance soil condition and nutrient uptake with concentrated humic acid

Humates increase soil fertility by

- Improving fertilizer efficiency
- Increasing the cationic exchange capacity and water holding capacity of soils
- Promoting better soil structure
- Enhancing the retention of nutrients within the root zone
- Stimulating beneficial microbial activity and root growth

HUMAMAX 9009

Available in: 25kg bags,

A highly concentrated humic acid granule, which is produced using the highest quality raw materials. Suitable for application direct to the growing beds with other solid fertilizers or mixed with water for application through Drip or Fertigation systems.

- Sourced from Super Active Leonardite
- Black Hollow Microgranular
- Water-Solubility: 99.8%-100%
- Potassium Content (K2O): 14%
- CEC(Cation Exchange Rate): 400-600meq/100g
- Soluble in acidic (PH>4), neutral, alkaline solution
- Anti-flocculation, No precipitation, No impurities
- Hollow particles, extremely light weight, no dust
- Natural plant growth regulator

HUMAPLUS K 9010

Available in: 25kg bags,

HUMAPLUS K is a concentrated soil conditioner, which is 100% water soluble, can be used in all agricultural crops including broadacre crops, horticultural crops, turf and pasture etc. Formulated to increase the ability of soil to retain nutrients and improve water-holding capacity. HUMAPLUS K enhances the soil's ability to chelate nutrients and to promote exchange of nutrients between plants and fertilizers being applied. Suitable for application direct to the growing beds or mixed with water for application through delivery systems.

- Sourced from 100% Leonardite
- Black Shiny Powder
- Water-Solubility: 99%-100%
- Potassium Content (K2O): 12%

APPLICATION RATES:
2-10kg per hectare

HUMAPLUS L

Available in: 20L & 1000L

Blended Liquid humic acid suitable for use with all forms of irrigation systems. For best results, use in conjunction with organic or mineral fertilizers.

- Potassium Content (K2O): 5%

APPLICATION RATES:
Apply 10-20 litres of HUMAPLUS L per hectare.

High quality concentrated Fulvic Acids to assist with nutrient application

Improves nutrient uptake by plants

Research shows that fulvates improve the efficiency of foliar applied fertilizers. This makes them very useful in quickly correcting deficiencies, allowing your crop to bounce back as fast as possible.

Key Benefits:

- Improve plant responses, yield and quality
- reduce burning effects from "hot" spray mixes
- Improve tank mix compatibilities
- Recognized as an effective spray adjuvant especially with herbicides to increase absorption efficiencies

FULVAPLUS 3001

Concentrated water soluble fulvic acid powder

- Dark Brown Powder
- Sourced from Maize & Leonardite
- Solubility In Water: 99.5%-100%
- Fulvic Acid (on dry Basis):80% Min
- PH: 5.0-6.5
- Trace Elements: Ca, Mg, s, Cu, Fe, Zn, Mn, Mo

FULVAPLUS L

Blended Liquid Fulvic acid for foliar application.

- Fluvic Acid Content: 10%

Available in: 25kg bags

Application Rates

Fertilizers: 1% fulvic powder in the blend
Foliar: 100-500g per 100Ltr water
Seed Treatment: 4-5kg per tonne of seed

Soil Application:

0.3-1kg/ha by fertigation
1% blend with granular fertilizer
4-5kg/tonne as seed dressing

Available in: 20L & 1000L

Application Rates

Foliar Application:

Apply 1-5L per hectare. Mix FULVAPLUS L with liquid fertilizers before application (1 part FULVAPLUS L to 100 parts water or fertilizer/nutrient solution).

Seed Treatment:

5L per tonne of seed
When mixing with other liquid fertilizers, test for compatibility with a small quantity in a jar.

Confidence with uptake and compatability

Our chelated trace elements are complexed using EDTA to create freely available nutrients for faster and efficient correction of deficiencies during the growing cycle. A soluble micro granules suitable fertigation and foliar application. They dissolve rapidly and completely and remain in solution ready for rapid uptake through via the roots or the leaf tissue when foliar applied.

Chelated trace elements allow a wide range of tank mixes and are compatible with many crop protection products and fertilizers, meaning less passes and more timely applications.

Key Benefits:

- Excellent efficient uptake
- Choice of individual elements and combinations
- Safe and compatible
- Improve tank mix compatibilities

100% water-soluble chelated micronutrients. They ensure micronutrients remain available to the crop and avoid the risk of precipitation or fixation. Suited to application through all fertigation systems – drip, low throw sprinklers, centre pivots, spray or direct soil applications.

CHELATED COPPER 15%

Available in: 25kg bags,

A high quality copper EDTA chelated product ideal for use in fertigation, hydroponics and soil application systems. Copper is essential for many major plant functions like photosynthesis, respiration and enzymatic processes. It also affects the strength of plant cells, fruit flavour and sugar content. Effective in correcting Copper shortages in field and horticultural crops.

CHELATED MANGANESE 13%

Available in: 25kg bags,

A high quality Manganese EDTA chelated product ideal for use in fertigation, hydroponics and soil application systems. Manganese plays an important role in photosynthesis. It also promotes the uptake of nitrate. High soil pH and too much available Iron can reduce Manganese availability. Over-irrigation or waterlogged conditions are also detrimental to Manganese availability.

CHELATED ZINC 15%

Available in: 25kg bags,

A high quality Zinc EDTA chelated product ideal for use in fertigation, hydroponics and soil application systems. Some of the functions of Zinc are enzyme activation, pH regulation and the formation of chlorophyll. Zinc deficiencies will have a detrimental effect on the size, structure and development of plant cells. High levels of soil P and high soil pH are commonly responsible for Zinc deficiencies.

PRODUCT	Analysis (%ow/w)			
	Cu	Fe	Mn	Zn
Chelated Copper	15			
Chelated Iron		13		
Chelated Manganese			13	
Chelated Zinc				15

LIQUID TRACE ELEMENTS

CHELATED COPPER 5% Available in: 20L & 1000L

A high quality copper EDTA chelated product ideal for use in fertigation, foliar and soil application systems. Copper is essential for many major plant functions like photosynthesis, respiration and enzymatic processes. It also affects the strength of plant cells, fruit flavour and sugar content. Effective in correcting Copper shortages in field and horticultural crops.

APPLICATION RATES:

Foliar Applications

Several applications may be required, 7-10 days apart. Avoid spraying over flowering.

Fruit crops

1.0 – 2.0 litres/ha during dormant stage, pre flowering and fruit fill as required.

Vegetables

1.0 – 2.0 litres/ha as required.

Vine crops

1.0 -2.0 litres/ha pre-flower, post fruit set and post harvest.

Broadacre crops

1.0 – 2.0 litres/ha. Early stages. Apply when leaf area is sufficient to intercept spray.

Fertigation/Soil Applications

Apply as required but do not exceed 10 litres/ha per application. Several applications may be required.

CHELATED ZINC 5% Available in: 20L & 1000L

A high quality Zinc EDTA chelated product ideal for use in fertigation, hydroponics and soil application systems. Some of the functions of Zinc are enzyme activation, pH regulation and the formation of chlorophyll. Zinc deficiencies will have a detrimental effect on the size, structure and development of plant cells. High levels of soil P and high soil pH are commonly responsible for Zinc deficiencies.

CHELATED MANGANESE 4.5% Available in: 20L & 1000L

A high quality Manganese EDTA chelated product ideal for use in fertigation, hydroponics and soil application systems. Manganese plays an important role in photosynthesis. It also promotes the uptake of nitrate. High soil pH and too much available Iron can reduce Manganese availability. Over-irrigation or waterlogged conditions are also detrimental to Manganese availability.

APPLICATION RATES:

Foliar Applications

Several applications may be required, 7-10 days apart. Avoid spraying over flowering.

Fruit crops

1.0 – 2.0 litres/ha when required. Minimum 2 applications from fruit fill.

Vegetables

1.0 – 2.5 litres/ha as required.

Vine crops

1.0 -2.0 litres/ha pre-flower and post fruit set.

Broadacre crops

1.0 – 2.5 litres/ha. Early growth stages. Apply when leaf area is sufficient to intercept spray.

Fertigation/Soil Applications

Apply as required but do not exceed 10 litres/ha per application. Several applications may be required.

PRODUCT	Analysis (%w/w)			
	Cu	Fe	Mn	Zn
Chelated Copper	5			
Chelated Iron				
Chelated Manganese			4.5	
Chelated Zinc				5



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AMMONIUM SULPHATE 21-0-0 24S

Available in: 25kg Bags

SOA is a valuable fertiliser as a straight product or in blends. Sulphur in SOA is sulphate sulphur which is the form taken up directly by plants. Sulphate sulphur is readily soluble in water and goes straight into solution when applied to the soil (providing there is moisture). SOA releases nitrogen to the soil directly as ammonium NH_4^+ , which is converted by bacteria to nitrate nitrogen. This process is favoured by conditions conducive to microbial activity, such as warm temperatures, moisture and organic matter.

CALCIUM NITRATE 15-0-0 19.6Ca

Available in:

Stable, rapidly available Calcium and Nitrate Nitrogen. Balanced plant growth & structural strength. The answer to continuous calcium uptake. Health, uniformity and yield. Shelf life and keeping quality. Flexible application. Can be applied by fertigation – very soluble. Can be evenly banded or broadcast – hard, even granule. Can be applied as a foliar application.

Calcium Nitrate is used at strategic times in the development of fruit trees in conjunction with other fertilizers. It is particularly suitable for post-harvest applications in stone and pomefruit and vines – flower quality, fruitset and early fruit development.

APPLICATION RATES:

100-250 kg per hectare.

SODIUM BORATE 0-0-0 20B

Available in: 25kg Bags

- High analysis flowable and available
- Ready to use formulation
- Ideal for foliar application and fertigation
- Effective treatment for all crops

AMMONIUM PHOSPHATE 10-21-0 1.5S

Available in:

MAP is fully water soluble supplying two essential elements nitrogen and phosphorous, vital in accelerating root development at crop establishment.

POTASSIUM NITRATE 13-0-45

Available in: 25kg Bags

Water soluble product for fertigation or foliar application, supplying nitrate, nitrogen and chlorine free potassium.

- Free flowing granule
- 100% Water Soluble

POTASSIUM THIOSULFATE 0-0-36 25S

Available in: 1000L

High Analysis Potassium and Sulphur Liquid Fertilizer. Suitable for all types of vegetables, fruit, turf and broadacre application.

HIGH LOADING NPK SOLUTIONS

Available in: 1000L

HIGH N 32-10-10+te

HIGH P 10-40-10+te

HIGH K 15-5-36+te

BALANCE 20-20-20+te



Product	N	P	K	S	Ca	Mg	Mo	Zn	Cu	Mn	Fe	B	Comments
HUMATES													
HUMAMAX 9009			14										Available in 100% soluble powder or 30% solution, 75% potassium humate. Suitable for blending with inorganic fertilizers to enhance nutrient chelation and plant uptake. The ultimate support for soil health and root stimulation.
HUMAPLUS K 9010			12										
HUMAPLUS L			5										
FULVATES													
FULVAPLUS 3001								1					Fulvic Acid used for rapid response when applied as a foliar spray. Available in powder for blending to fertilizers or liquid for foliar applications
FULVAPLUS L								0.1					
CROP NUTRITION													
CHELATED ZINC 15								15					Fully chelated form of EDTA with excellent uptake efficiency for rapid nutrient deficiencies correction. Crystal form soil application or addition to spray tank solutions
CHELATED COPPER 15									15				
CHELATED MANGANESE 13										13			
CHELATED ZINC 5L								5					Fully chelated form of EDTA with excellent uptake efficiency for rapid nutrient deficiencies correction Liquid form for use as a foliar treatment
CHELATED COPPER 5L									5				
CHELATED MANGANESE 4L										4			
CALCIUM NITRATE	15				20								Water Soluble granules for application with blend fertilizers or drip, foliar and fertigation systems
SODIUM BORATE												20	
POTASSIUM NITRATE	13		45										
AMMONIUM SULFATE	21			24									
MONOAMMONIUM PHOSPHATE	10	21		1									
POTASSIUM THIOSULFATE			36	25									

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