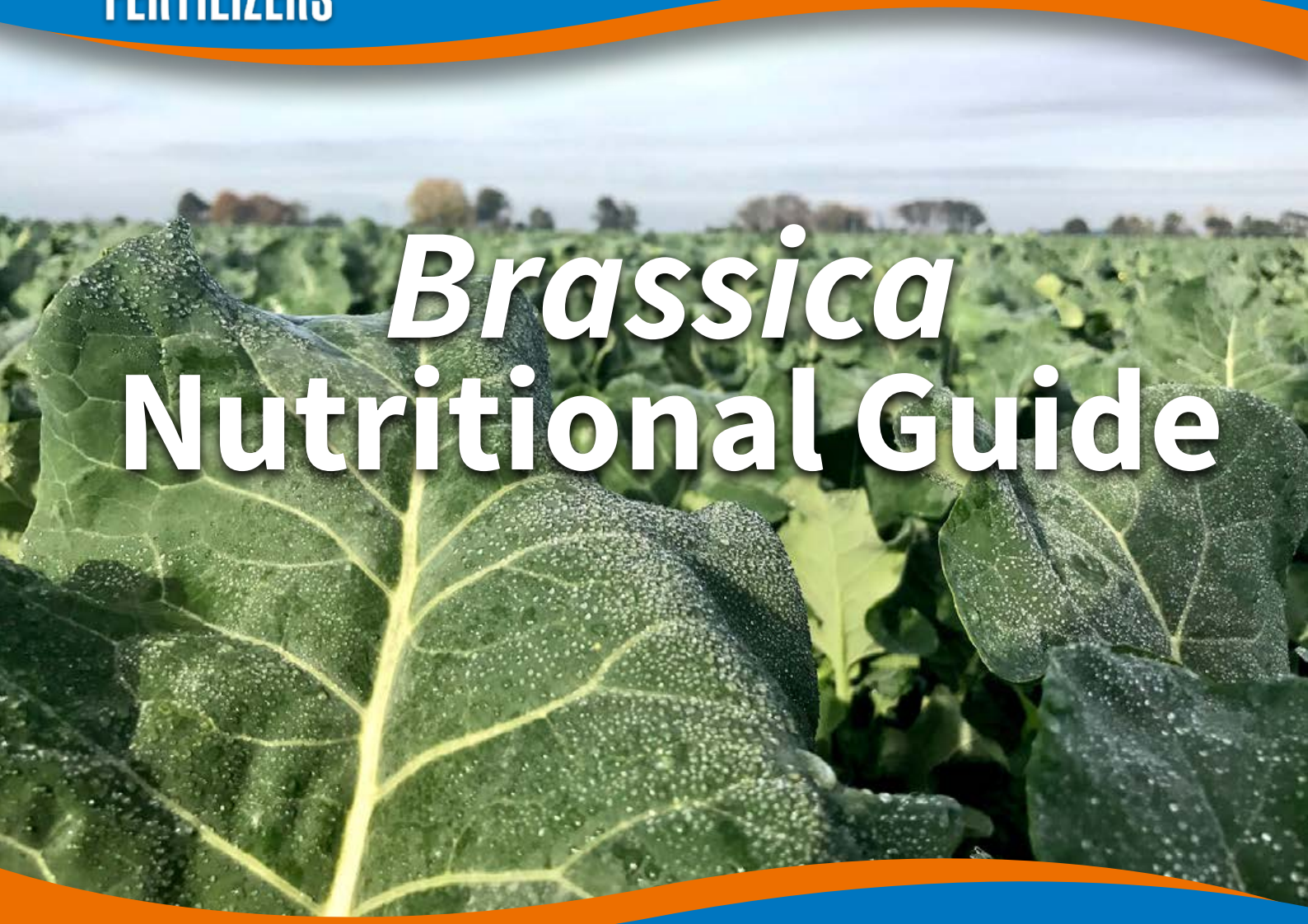
Quality Ingredients
Australian Made
Family Owned

SLTEC®

FERTILIZERS

Nutrient Solutions



Brassica Nutritional Guide

SLTEC®'s range of quality fluid fertilizers and microbial stimulants are supported by our comprehensive field agronomy service.

www.sltec.com.au

Why Choose SLTEC® Fertilizers?

SLTEC® Fertilizers is a leading manufacturer of fluid Fertilizers, based in Northern Victoria.

Our Promise

Quality

SLTEC® Fertilizers is committed to supplying consistently high quality products.

Investment

SLTEC® Fertilizers will ensure that your fertilizer inputs maximise the return on your investment.

Service

SLTEC® Fertilizers will provide professional, logistical and agronomic support to ensure a sustainable relationship.

Read our quality assurance policy online at **sltec.com.au/quality**

Why use Fluid Fertilizer?

- Efficient and highly plant available
- Can deliver many nutrients with a single application
- Small and frequent applications reduce leaching and runoff
- Foliar and Fertigation options allow flexible application timing unlike relying on broadcast application
- Consistency of product and uniform application across the soil
- Nutrients infiltrate to the root zone where maximum uptake is achieved
- Foliar application particularly of trace elements avoids tie up in the soil
- Can be mixed with a range of farm chemicals
- Labour savings and improved workplace safety

SLTEC's Commitment to Quality

Can your fertilizer supplier give you this sort of quality assurance?

SLTEC is committed to delivering quality products and services. We continue to put a tremendous effort into ensuring that our products meet the tightest quality parameters.

- We carefully select the ingredients we use in our formulations from suppliers all over the globe.
- We routinely seek independent laboratory testing to confirm the levels of all nutrients listed on our product labels. We also regularly test for heavy metals or other contamination.
- Our blends are developed by our formulation chemist, who has now developed over 400 different blends, some of which have been servicing very sensitive crops in hygienically clean glass house environments.
- We invest annually in formulation research and advanced chemistries for the fluid fertilizer and industrial water treatment sectors.
- Our team has specialized formulation software that aids the development of each blend, from basic chemistry building blocks into complex and sophisticated formulations for applications such as hydroponics, foliar fertilizer, fertigation, water treatment etc.
- Our batching and mixing systems are calibrated every 6 months by an external certifying body.
- Each batch must meet a variety of tests and quality specifications before being released for dispatch.
- Our labels state accurately the nutrient content of each blend and comply fully with state and federal legislation and the Fertilizer Australia Labelling Code of Practice.
- We retain samples of each and every blend made with a unique batch number, enabling traceability of batches.
- Our staff are qualified and thoroughly trained to ensure our products and services remain at the highest standards of excellence.

In summary, quality is an absolutely essential component of the culture and processes at SLTEC and we pride ourselves on it. Development, manufacture, storage, labelling and transport of our products is carried out in a manner that aims to provide our customers with the assurance that the products they receive are of the highest quality, ready to use and will deliver the outcomes desired.

Further information on our quality policy is available on our website.

Brassica Products

Product Code	Name	N% (w/v)	P% (w/v)	K% (w/v)	S% (w/v)	Ca% (w/v)	Biological Stimulation	Chelating Agent	Specific Gravity (kg/L)	pH Range	Typical Application Rates	
											Fertigation	Foliar Use 200 to 2,000 L/ha water
GG0009	**Baseline Plus™** N as NO_3 0.02%, N as Urea 11.7%, P as PO_4 4.9%, Mg 0.2%, Mn 0.01%, Zn 0.01%, Cu 0.005%, Mo 0.005%, B 0.02%, Fe 0.01%, Fulvic Acid 0.01%, Fish Emulsion 0.4%, Humic Acid 0.3%, Kelp 0.4%, Molasses 0.4%	11.7	4.9	13.6	2.0	0.01	Y	Y	1.29 - 1.32	7.5 - 8.5	10 - 80 L/ha	2 - 15 L/ha
SG0017	**BiologiCAL® PLUS** N as NO_3 0.3%, P as PO_4 0.1%, Fulvic Acid 0.01%, Fish Emulsion 0.3%, Humic Acid 0.2%, Kelp 0.3%, Molasses 41.9%	0.3	0.1	2.0	1.8	6.3	Y	-	1.27 - 1.31	6.0 - 7.0	20 - 60 L/ha	4 - 20 L/ha
SG0039	**QuadSHOT®** Fe 0.006%, C 5.2%, Fulvic Acid 0.3%, Fish Emulsion 8.0%, Humic Acid 6.6%, Kelp 8.0%, Molasses 8.0%	0.3	0.1	3.4	0.2	0.2	Y	Y	1.10 - 1.20	2.5 - 3.5	20 - 60 L/ha	1 - 5 L/ha
SG0037	**AquaLIME 38™**	-	-	-	-	38.0	-	-	1.60 - 1.61	9.0 - 10.0	50 - 200 L/ha depending on soil pH	N/A
SNPK0079	**Veggie Boost™** N as NO_3 5.7%, Mg 0.9%, B 0.1%	5.7	-	5.9	-	3.7	-	-	1.22 - 1.23	4.0 - 6.0		
GG0024	**Cal Mag & Boron™** N as NO_3 12.2%, Ca 12.1%, Mg 3.4%, B 0.2%	12.2	-	-	-	12.0	-	-	1.47 - 1.50	2.0 - 3.0	10 - 100 L/ha	5 - 10 L/ha
GG0022	**Calcium Nitrate™** N as NO_3 13.0%	13.0	-	-	-	18.5	-	-	1.48 - 1.49	5.0 - 7.0	10 - 100 L/ha	5 - 10 L/ha
SNPK0074	**CellCAL Plus™** Cu 0.3%, B 0.1%	-	-	-	-	5.9	-	-	1.13 - 1.14	6.0 - 7.0	10 - 100 L/ha	5 - 10 L/ha
SS9001	**SS 11:16:0™** N as NH_4 11.3%, P as PO_4 16.0%	11.3	16.0	-	-	-	Y	Y	1.29 - 1.30	6.0 - 7.0	20 - 100 L/Ha	2 - 10 L/ha
GG0068	**High KP™** P as PO_4 12.3%	-	12.3	36.4	-	-	-	-	1.55 - 1.56	12.0 - 13.0	10 - 80 L/ha	1 - 5 L/ha
SNPK0040	**Crop Booster Plus™** N as NO_3 2.1%, N as NH_4 2.9%, Mg 0.2%, Mn 0.4%, Zn 0.4%, Cu 0.5%, Mo 0.008%, B 0.05%, Fulvic Acid 0.5%	5.0	15.0	2.1	-	4.0	Y	Y	1.32 - 1.33	< 2.0	10 - 80 L/ha	2 - 10 L/ha

Sustain & Gro® Product Range

SLTEC®'s Sustain & Gro® range is a range of organic biostimulants which can be used independently or blended with our extensive range of fluid fertilizers.

The Blending of these Bio Stimulants assists in three key areas:

1. Maximising in the effectiveness & efficiency of the base nutrients
2. Improving long term Soil Health and in turn improving the sustainability of any agriculture enterprise.
3. In turn improving the crops ability to resist disease and stress through access to a greater pool of available nutrients.

Sustain & Gro® Products

Code	Product Name	Fulvic Acid	Fish Emulsion	Humic Acid	Kelp	Molasses	Specific Gravity (kg/L)	pH Range	Typical Application Rates	
									Fertigation	Foliar Use 200 to 2,000 L/ha water
SG0039	**QuadSHOT®** N 0.4%, P 0.1%, K 3.4%, S 0.2%, Ca 0.2%, Fe 0.006%	0.3	8.0	6.6	8.0	8.0	1.10 - 1.20	10.0 - 11.0	20 - 60 L/ha	1 - 20 L/ha
SG0020	**QuadSHOT® & Z Mo** N 0.3%, P 1.3%, K 1.9%, S 1.1%, **Zn 1.8%, Mo 0.05%**, Fe 0.02%	0.2	6.0	4.9	6.0	6.0	1.14 - 1.15	3.0 - 4.0	N/A	1 - 5 L/ha
SG0001	**TripleSHOT®** N 0.3%, P 1.6%, K 2.8%, S 0.1%, Fe 0.03%	0.3	8.0	6.6	8.0	-	1.13 - 1.14	3.0 - 3.5	20 - 60 L/ha	1 - 5 L/ha
SG0003	**Bio Kelp™** N 0.2%, P 0.1%, K 3.2%, S 0.3%	-	-	-	20.0	-	1.08 - 1.09	8.5 - 9.5	5 - 20 L/ha	2 - 10 L/ha
SG0019	**Bio Kelp & Z Mo™** P 0.8%, K 3.1%, **Zn 3.0%, Mo 0.05%**	-	-	-	16.4	-	1.14 - 1.15	3.0 - 4.0	N/A	1 - 5 L/ha
SG0015	**Bio Kelp Guardian™** N 0.1%, P 2.9%, K 9.2%, S 0.5%	-	-	-	26.0	-	1.15 - 1.16	9.4 - 9.8	5 - 20 L/ha	2 - 10 L/ha
SG0017	**BiologiCAL® PLUS** N 0.3%, P 0.1%, K 2.0%, S 1.8%, **Ca 6.3%**, B 0.1%	-	0.3	0.2	0.3	41.8	1.27 - 1.28	8.0 - 10.0	20 - 60 L/ha	1 - 40 L/ha
SG0031	**BiologiCAL® PLUS TE** N 1.1%, P 0.1%, K 1.8%, S 1.6%, **Ca 5.7%, Mn 0.5%, Zn 1.0%, Cu 0.3%, Mo 0.005%, B 0.05%**	-	0.3	0.2	0.3	37.9	1.31 - 1.32	6.5 - 7.5	20 - 60 L/ha	4 - 20 L/ha
SG0012	**Fish Emulsion™** N 2.5%, P 0.3%, K 0.3%, Ca 0.5%	-	100	-	-	-	1.04 - 1.05	3.5 - 3.8	5 - 20 L/ha	2 - 5 L/ha
SG0011	**Fulvic 10™** K 2.6%	10.0	-	-	-	-	1.06 - 1.07	5.0 - 6.0	N/A	1 - 3 L/ha
SG0016	**Humic K 26™** N 0.1%, K 6.0%, Fe 0.1%	1.0	-	25.0	-	-	1.09 - 1.10	9.5 - 11.0	2 - 20 L/ha	N/A
SG0013	**Molasses™** N 1.0%, P 0.1%, S 0.7%, Ca 1.1%	-	-	-	-	100	1.27 - 1.28	5.0 - 6.0	2 - 10 L/ha	N/A
SG0037	**AquaLIME 38™**	Calcium: 38.0% Carbon: 11.6%					1.59 - 1.60	9.0 - 10.0	Contact your SLTEC representative for specific application rate information	

Role of Calcium

Mobility and Uptake of Calcium by Plants

Calcium uptake by the plant is passive and does not require energy input. Calcium mobility in the plant takes places mainly in the xylem, together with water. Therefore calcium uptake is directly related to the plant transpiration rate.

Conditions of high humidity, cold and a low transpiration rates may result in calcium deficiency. Salinity buildup might also cause calcium deficiency because it decreases the water uptake by the plant.

Since calcium mobility in plants is limited, calcium deficiency will appear in younger leaves (die back or burns) and in fruits (blossom end rot, bitter pit), because they have a very low transpiration rate. Therefore, it is necessary to have a constant supply of calcium for continued growth.

Roles of Calcium in Plants

Calcium is an essential plant nutrient. It has many roles:

- Participates in metabolic processes of other nutrients' uptake.
- Promotes proper plant cell elongation.
- Strengthens cell wall structure - calcium is an essential part of plant cell wall. It forms calcium pectate compounds which give stability to cell walls and bind cells together.
- Participates in enzymatic and hormonal processes.
- Helps in protecting the plant against heat stress - calcium improves stomata function and participates in induction of heat shock proteins.
- Helps in protecting the plant against diseases - numerous fungi and bacteria secret enzymes which impair plant cell wall. Stronger cell walls, induced by calcium, can avoid the invasion.
- Affects fruit quality.
- Has a role in the regulation of the stomata.

Factors Affecting the Availability of Calcium to the Plants

Calcium forms insoluble compounds with other elements in soil, such as phosphorous. Calcium that is in the form of an insoluble compound is not available to plants.

Since calcium is a positively charged ion, it is adsorbed in the soil to the surface of clay and organic particles which are negatively charged.

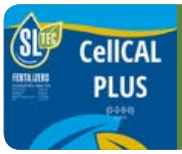
Positively charged ions adsorbed to soil particles are termed "exchangeable ions" because they can be exchanged by other ions present in the soil solution. Soil analysis determines the level of exchangeable calcium ions, and not the total calcium in soil, because the exchangeable calcium is the form which is available to the plant.

Several factors in the soil analysis can help in assessing the availability of calcium to plants:

- **Soil pH** - usually soils with a higher pH level contain more available calcium.
- **CEC** - this is a soil characteristic that describes the total amount of positively charged exchangeable ions that the soil can hold. A higher CEC indicates a higher capacity of the soil to adsorb and hold calcium, and therefore higher calcium availability.
- **Presence of competing ions** - calcium competes with other positively charged ions, such as sodium (Na^{+}), potassium (K^{+}), and magnesium (Mg^{+2}). Applying too much of these positively charged ions might decrease calcium uptake by plants. Sodium ions can replace the adsorbed calcium, damage soil structure and decreases calcium availability.

Calcium Product Options

BiologiCAL® PLUS
Plant available calcium with a balanced mix of biostimulants.



CellCAL PLUS
5.9% Calcium + Copper & Boron

Cal Mag & Boron
Maintains plant Ca : Mg ratios with boron to assist calcium mobility.

Highly Available, Activated Calcium + Organic Boost

BiologiCAL® PLUS

Product Code: SG0017

Plants require calcium in relatively large amounts for many functions including cell division & strength, root system and leaf development. Calcium is also an essential element required for healthy soils, influencing both the physical, chemical and biological aspects.

Benefits of BiologiCAL® PLUS

- Aids in maintaining a high pH to control club root
- Improves nitrogen efficiency; compatible with a wide range of nitrogen-based products.
- Helps to displace sodium and magnesium in difficult soils
- Improves soil structure and friability
- Improving moisture penetration/infiltration
- A unique form of activated calcium that stimulates plant uptake
- Built-in soil and plant stimulants to enhance soil fertility and plant health
- Assists in the reduction of soil nematodes that inhibit root growth and plant productivity.
- Provides plant available calcium without extra nitrogen
- Improves plant resistance to disease and overall resilience
- Improves cell wall strength, plant durability and stress tolerance.

Guaranteed Analysis

Calcium (Ca)	6.3%
Nitrogen (N)	0.3%
Phosphorus (P)	0.1%
Potassium (K)	2.0%
Sulphur (S)	1.8%
Molasses	41.9%
Carbon (C)	20.0%
Fish Emulsion	0.3%
Kelp	0.3%
Humic Acid	0.2%
Specific Gravity	1.27 - 1.30 kg/L
pH	8.0 - 10.0

BiologiCAL® PLUS TE

All the Benefits of BiologiCAL® PLUS with an additional 5 trace Elements; Zn 0.6%, Mn 0.3%, Cu 0.15%, Mo 0.005% & B 0.05%

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Soil Health

Inputs that Stimulate Soil Biology

Kelp

Bio Kelp (22% Kelp)

Kelp extracts contain amino acids such as glycine and plant hormones including auxins, betaines and cytokinins which in combination stimulate plant growth. They should not be regarded as fertilizers as the nutrient levels are typically too low to have any direct value. Kelp extracts do have strong effects on soil microbes and in particular stimulate the activity of photosynthetic bacteria and actinomycetes which can help provide protection against soil-borne pathogens.

Fish Emulsion

Fish Emulsion (100% Fish Emulsion)

Fish Emulsions are a source of readily available organic nitrogen and can be especially useful when this is needed to improve the C : N ratio in the soil. They are also beneficial in stimulating growth and activity of many micro-organisms. The net effect is an increase in the potential for nitrogen cycling and also a somewhat reduced requirement for nitrogen inputs to some crops and pasture. Lower application rates (2 L/ha) appear to stimulate fungi and cellulose utilisers that do not respond well to high Nitrogen. Higher rates (10 L/ha) appear to promote photosynthetic bacteria and actinomycetes and suppress lactic acid bacteria.

Humate

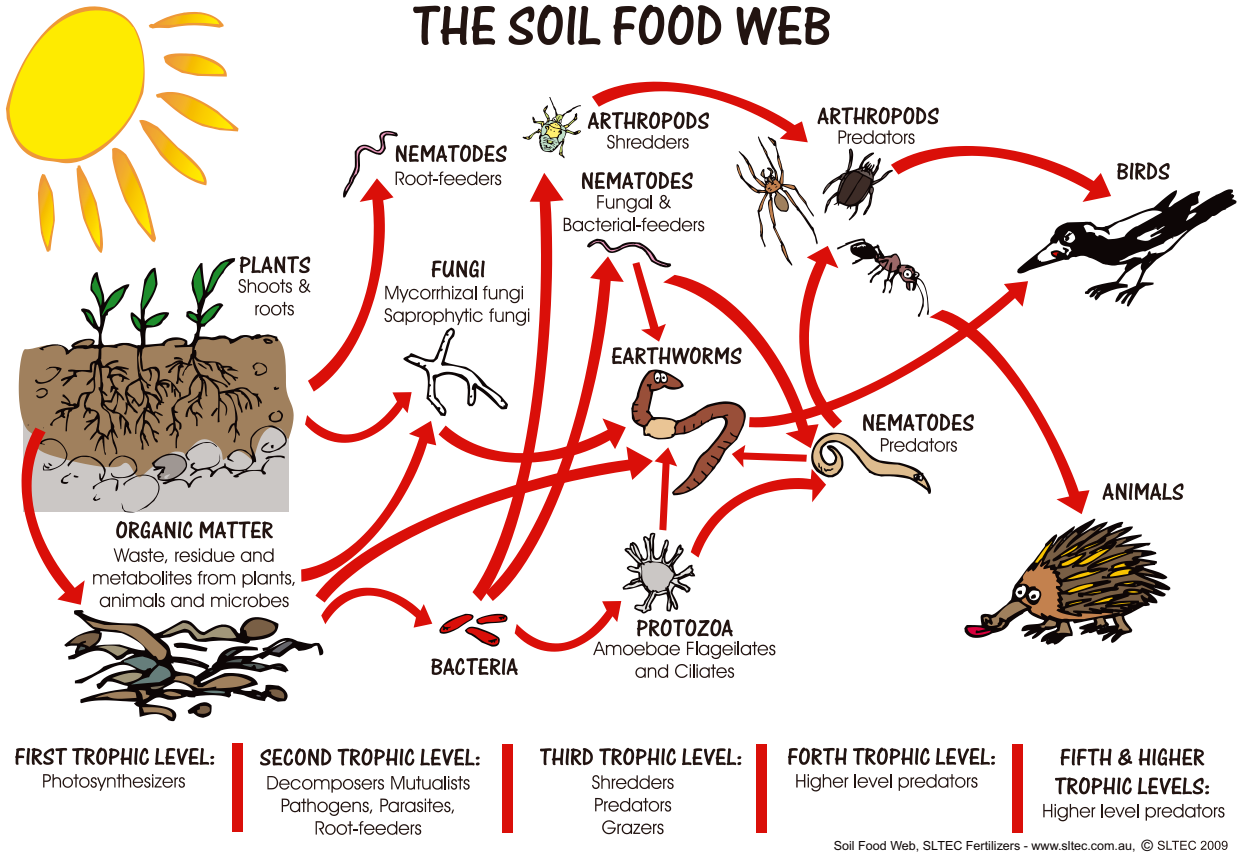
Humic K 26 (25% Humic Acid)

Humates are soil conditioners with high carbon content. They are useful materials where adjustment of the C : N ratio is required. Humates are also important in releasing bound nutrients into plant available forms and helping to improve soil structure at relatively low application rates. These materials produce significant biological effects with a strong suppression of lactic acid bacteria and stimulation of fungi, especially cellulose utilisers, which as the name suggests are important in the breakdown of cellulose and certain other resistant materials, thus increasing the formation of humus and helping to improve soil structure.

Molasses

Molasses (100% Molasses)

Molasses provides a readily metabolisable carbon and energy source that can be utilised by most organisms. Low rates (2 L/ha) can be effective in stimulating most groups of microbes and in particular fermenters like lactic acid bacteria and yeasts. However, being quickly utilised, it will provide only a short-term benefit unless other actions have been taken to improve the soil environment.



Australian Organic Registered Farm Input
ALLOWED INPUT 11936

SL TEC FERTILIZERS

Four Key Plant & Soil Microbial Stimulants
Now Organically Certified

QuadSHOT®

Product Code: SG0039

QuadSHOT® contains a carefully selected range of organic additives and biological stimulants. These ingredients stimulate soil biological activity, thereby improving the cycling and availability of plant nutrients and soil fertility and health. Together with management practices that enhance organic matter and soil structure development, this product assists in mobilizing available nutrients and improving plant uptake efficiencies.

Humic acid – increases nutrient holding capacity of the soil
Kelp – enhances plant and root growth development
Fish Emulsion – stimulates nitrogen cycling
Molasses -promotes beneficial soil biology
Each of these stimulants are also available as individual products

Benefits of QuadSHOT®

- Improves saline and sodic soils
- Improves the moisture holding capacity of soils
- Enhances nutrient cycling and availability
- QuadSHOT® can be used to soften a range of foliar fertilizers, allowing higher use rates without the potential for phytotoxic burn - e.g. Nitro QUAD 3™ and UAS QUAD 3™
- QuadSHOT® is designed to aid in the soils mineralisation and nutrient availability. It also increases the plants uptake efficiency of essential minerals.
- Improves overall soil health and vitality.

Guaranteed Analysis

Fish Emulsion	**8.0%**
Kelp	**8.0%**
Molasses	**8.0%**
Humic Acid	**6.6%**
Fulvic Acid	0.3%
Nitrogen (N)	0.3%
Phosphorus (P)	0.1%
Potassium (K)	3.4%
Sulphur (S)	0.2%
Carbon (C)	5.2%
Calcium (Ca)	0.2%
Iron (Fe)	0.006%
Specific Gravity	1.15 - 1.16 kg/L
pH	10.0 - 11.0

Typical Application Rates

Foliar
1 to 5 L/ha
Broadacre use at least 100 L/ha water
Horticulture use 200 to 2,000 L/ha water

Fertigation
20 to 60 L/ha through sprinkler, traveller or drip systems

Pop-Up, At Planting, Directed Soil Spray
Banded with Seed: 4 to 7 L/ha
Banded to the Side: 5 to 15 L/ha
- with 10 to 100 L/ha of water

20 - 60 L/ha as a directed soil spray,
prior to planting or banded under canopy,
with 200 - 800 L/ha water

Dipping Rates

Tree Age	Young	Established
Fertigation	40 L/ha	80 L/ha
Pre-Plant Dip	10 - 30 L/ha (Per 100L Water)	

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Brassica Crop Removal

Macronutrient Requirements and Typical Values

Crop	Total fresh matter (t/ha)	Harvest residues (t/ha)	Marketable yield (t/ha)	Total Fresh Matter (kg/t)				
				N	P	K	Ca	Mg
Broccoli	90	70	20	3.7	0.46	4.0	2.22	0.28
Brussel Sprouts	90	65	25	4.7	0.67	5.1	-	0.25
Cauliflower	100	60	40	3.2	0.48	3.3	1.52	0.14
Chinese Cabbage	120	50	70	1.6	0.36	2.7	1.13	0.10
Kale	45	25	20	4.6	0.69	5.1	-	0.25
Kohirabi	60	15	45	3.0	0.45	3.5	-	0.18
Red Cabbage	90	40	50	2.6	0.37	3.2	-	0.19
Savoy Cabbage	80	40	40	3.8	0.50	3.6	-	0.22
White Cabbage	120	40	80	2.3	0.33	2.7	2.43	0.18

Source: Fink Et Al. (1999), Nivet (1996), Sanchez Et Al. (2001), Hernandez Et Al.(2004), Schroen (1987), U.S. Department of Agriculture (1999), http://veganpeace.com/nutrient_information/resources.htm

Brassica crops are most productive when grown on soils with a neutral soil pH. The ideal being pH 6.5 for mineral soils and 5.5 on organic soils. When pH drops below 5.5, phosphorus, potassium, sulphur, calcium, magnesium and molybdenum availability drops, while undesired heavy metals, such as cadmium and aluminium can become more plant available.

Nitrogen

Is needed in large quantities and helps to maximize growth and yield. Key nitrogen-need is during intensive leaf production. Total nitrogen-requirements vary according to brassica type and range between 1.6kg/t to 4.7kg/t.

Phosphorus

Is required early on in the plant's development to ensure good root growth and to boost establishment as well as throughout vegetative growth. Brassicas utilize around 0.33 - 0.67 kg P/t of total fresh matter.

Potassium

is needed in large quantities – often at levels above those for nitrogen. Total crop requirement, depending upon brassica type is between 2.7 - 5.1 kg/t, with significant proportions being removed in crops such as cabbage at harvest.

Calcium

Is the fourth most important macronutrient. It is also needed in relatively large quantities at around 2.2 kg/t in broccoli and up to 2.4 kg/t in cabbage. Peak calcium requirement is at the beginning of head formation. While most of the calcium is utilized for leaf growth, the relatively small amounts that are found in the harvested heads, buttons or leaves help boost crop quality and storage characteristics.

Magnesium

Is required at lower levels than in other crops and removals are between than 0.1 - 0.3 kg/t depending on crop.

At last! A complete fluid nutrient solution

Baseline Plus™

Product Code: GG0009

Baseline Plus has a complete and balanced NPK analysis suitable for fertigation and foliar application across a wide range of crops. The analysis is perfect for plant establishment and maintained growth where a N : K ratio near 1 : 1 or a mid-season nutrient boost is required.

Benefits of Baseline Plus

- Chelated trace elements for rapid plant uptake and to drive the NPK metabolism.
- Contains SLTEC's QuadSHOT® - The ingredients stimulate soil biological activity; improving the cycling and availability of plant nutrients, plant uptake efficencies and soil fertility and health.
- Baseline Plus has a high analysis compared to other liquid products and provides economic and efficient supply of nutrients and the capacity to reduce rates compared to common prilled complete fertilizers on the market.
- Efficencies can be made with Baseline Plus in fertigation applications by placing the nutrients at the root mass where they will be taken up by the plant; reducing loss or waste of nutrients.

Also available with phosphonic acid – Baseline Phos Plus™
Baseline Plus™ with the additional benefits of phosphonic acid. The addition of phosphonic acid gives 125g of phosphonic acid per 1 L or 1.25 kg per 10 L application.

Guaranteed Analysis

Nitrogen (N)	11.8%
Phosphorus (P)	4.8%
Potassium (K)	13.6%
Sulphur (S)	2.0%
Carbon (C)	0.3%
Magnesium (Mg)	0.2%
Manganese (Mn)	0.006%
Zinc (Zn)	0.01%
Copper (Cu)	0.005%
Molybdenum (Mo)	0.005%
Boron (B)	0.02%
Iron (Fe)	0.01%
Fulvic Acid	0.01%
Humic Acid	0.3%
Fish Emulsion	0.4%
Kelp	0.4%
Molasses	0.4%
Specific Gravity	1.29 - 1.32 kg/L
pH	7.5 - 8.5

Typical Application Rates

Foliar:
2 to 15 L/ha
Horticulture use 200 to 2,000 L/ha water
Broadacre use at least 100 L/ha water

Fertigation:
10 to 80 L/ha

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Tissue Testing

Why Tissue Test?

Plant tissue analysis acts as an early warning system to highlight any nutrients that may become either deficient, toxic, or which may affect crop yield and quality before the plant displays any visible symptoms. Monitoring plants' uptake of nutrients and understanding soil nutrition provides growers with management tools that are likely to improve profitability and the long-term viability of their enterprise.

The Increasing Need

Modern agriculture demands both high volume and quality yields. Additionally, you demand profitable yields. In satisfying these demands, plant tissue analysis has become a valuable crop production tool.

One of the more important factors affecting crop yields is the nutrient status of the plant or the flow of nutrients to plant tissues during the growing season. Nutrient status is an 'unseen' factor in plant growth, except when deficiencies become so acute that visual deficiency symptoms appear on the plant.

How Can a Tissue Test Help?

A plant tissue analysis will show the nutrient status of the plants during the growing season and detect unseen hidden deficiencies. Plant tissue analysis can also supply information to confirm visual deficiency symptoms.

Though usually used as a diagnostic tool for future correction of nutrient problems, a plant tissue analysis from young plants will allow for a corrective fertilizer application that same season. Combined with data from a soil analysis, a tissue analysis is an important tool in determining proper fertilizer applications to balance the nutrient availability in the soil and the nutrient requirements of the crop.

Adequate Nutrient Contents

Dev. Stage	N (%)	NO_3-N (%)	P (%)	K (%	Ca (%)	Mg (%)
4 - 6 Leaves	5.5 - 6.5	0.80 - 1.10	0.50 - 0.80	3.5 - 6.5	2.0 - 3.5	0.40 - 0.50
10 - 12 Leaves	5.5 - 6.5	0.60 - 0.80	0.50 - 0.80	3.5 - 6.5	2.0 - 3.5	0.25 - 0.50
First Buds	5.5 - 6.5	0.35 - 0.60	0.45 - 0.80	3.0 - 5.0	1.0 - 3.5	0.20 - 0.45
Heading	5.5 - 6.0	0.30 - 0.50	0.45 - 0.80	3.0 - 4.5	1.0 - 2.5	0.20 - 0.30
Pre-harvest	4.0 - 5.0	0.25 - 0.40	0.45 - 0.70	3.0 - 3.5	1.0 - 2.5	0.18 - 0.25

Source: Catellanos Et Al. (1999)

A Multitrace Solution to Maximize Crop Potential

FERTILIZERS

TE 8 PLUS™

Product Code: SNPK0046

A foliar multi-trace element blend activated with fulvic acid (0.5%) to maximise uptake at lower rates than standard trace blends across a wide range of crops.

Benefits of TE 8 PLUS™

- A focus on magnesium, manganese, zinc and copper – the key drivers of photosynthesis, healthy leaves & plants; resulting in reduced disease pressure.
- Additional nitrogen to promote plant response and rapid plant uptake.
- Molybdenum and boron to enhance assimilation and transport in the plant
- Fully soluble nutrients in plant available forms.
- Fulvic acid provides an efficient chelating agent with only small amounts required to benefit plant permeability to a range of nutrients.
- TE 8 PLUS™ is physically compatible with a wide range of herbicides, insecticides and fungicides. Please contact SLTEC® for more information.
- TE 8 PLUS™ will help ensure you utilise all your fertilizer inputs as the trace elements work in synergy with your macro applications.

TE 8 PLUS™ is versatile across a range of crops from broadacre cereals and vegetables to pre-bloom and post harvest application in vineyards and orchards where it is often combined with SLTEC® Nitro QUAD 3™ or Lo Biuret Urea to improve bud nutrient levels to drive early spring growth.

Guaranteed Analysis

Nitrogen (N)	2.6%
Potassium (K)	0.1%
Sulphur (S)	4.2%
Magnesium (Mg)	2.4%
Manganese (Mn)	3.1%
Zinc (Zn)	3.1%
Copper (Cu)	0.5%
Molybdenum (Mo)	0.02%
Boron (B)	0.2%
Iron (Fe)	0.7%
Fulvic Acid	0.5%
Specific Gravity	1.30 kg/L
pH	1.0 - 2.0

Typical Application Rates

Foliar

2 to 10 L/ha
Horticulture use 200 to 2,000 L/ha water
Broadacre use at least 100 L/ha water

Fertigation

10 to 25 L/ha

Contact:
T: 1800 768 224
E: enquiries@sltec.com.au
www.sltec.com.au

AquaLIME 38™
(Flowable Lime)

Product Code: SG0037

AquaLIME 38™ is a highly flowable calcium carbonate suspension designed to deliver high purity, micronized particles to the soil to raise pH and improve soil structure. Through foliar application, it provides an extremely efficient source of calcium to crops.

AquaLIME 38™ utilizes a highly advanced industrial process to hold the micronized particles in suspension, thereby improving the dispersion of the product when applied to the soil or foliage.

AquaLIME 38™ is an extremely concentrated and reactive form of calcium carbonate (or "lime"). It is produced by a specialised milling process where the high purity raw material is ground to 1 micron in size. The product's extreme fineness delivers an impressive surface area of 13 m^2/g, significantly enhancing its reactivity within the soil compared to all other forms of calcium carbonate.

AquaLIME 38™ has a superior Neutralising Value (NV) of 99 (pure calcium carbonate at NV 100 is the benchmark) compared to other fluid lime sources on the Australian market. However, this is only part of the story - because of the fineness of AquaLIME 38, its effective Neutralising Value is considered to be 99 because every particle is 100% reactive in the soil.

Also, it is far more effective in higher pH soils. A coarse aglime will struggle to lift soil pH above 6 because the logarithmic response of the pH scale means the soil environment isn't acidic enough to react and dissolve coarser lime particles. AquaLIME 38™ can further assist in pH adjustment.

"The high-grade material in AquaLIME 38™ means responses are extremely fast in the drip zone – in Thailand on red tropical soil, for example, the pH increased from 4.6 to 5.7 in three weeks after an application of 32 L/ha!"

Why Use AquaLIME 38™?

- Highly uniform - extremely fine particle size (1 micron)
- Highly reactive - high purity calcium carbonate
- Neutralizing Value of 99
- Flowable for easy pumping
- Can be applied to soil as a broadcast or banded application or via irrigation systems
- Can be applied to crops as a foliar calcium treatment

Chemical Analysis;

Calcium (Ca):	38% w/v
Carbonate (CO_3):	57.7% w/v
Carbon (C):	11.6 % w/v
pH:	9 - 10
Specific Gravity:	1.60 kg/L
Neutralising Value:	99

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Application Rates (Soil)

Soil Type/Textural Class	L per ha AquaLIME 38™ (per 0.1 pH improvement)
Sands / Loamy Sands	30 - 40
Sandy / Silty Loams	50 - 70
Sandy Clay Loams	70 - 85
Light to Medium Clays	85 - 90
Heavy Clays	90 +

Application Rates (Foliar)

Foliar Applications

Crop Type	Growth Stage					
Apples	Pink Bud	Flowering	Fruit Set	Fruit Development	Ripening	Total
	5 – 10 L/ha with >1500 L/ha Water	No application during this period	5 – 10 L/ha with >1500 L/ha Water	5 – 10 L/ha with >1500 L/ha Water	5 – 10 L/ha with >1500 L/ha Water	25 - 50 L/ha
Cherry	Pre-Flowering	Fruit Development	Ripening	Post Harvest		Total
	5 – 10 L/ha with >1500 L/ha Water	5 – 10 L/ha with >1500 L/ha Water	5 – 10 L/ha with >1500 L/ha Water	5 – 10 L/ha with >1500 L/ha Water		20 - 40 L/ha
Tomatoes	Vegetative	Flowering	Fruit Set	Fruit Development	Ripening	Harvest	Total
	5 – 10 L/ha with >1000 L/ha Water Or fertigate with irrigation system at the same rate	No application during this period	5 – 10 L/ha with >1000 L/ha Water Or fertigate with irrigation system at the same rate	5 – 10 L/ha with >1000 L/ha Water Or fertigate with irrigation system at the same rate	5 – 10 L/ha with >1000 L/ha Water Or fertigate with irrigation system at the same rate	5 – 10 L/ha with >1000 L/ha Water Or fertigate with irrigation system at the same rate	30 - 60 L/ha

Soil Banded or Broadcast Applications

Crop Type	Growth Stage	
Potato	Tuber Initiation to Canopy Closure	
	200 – 500 L/ha with 400 to 800 L/ha Water	
Carrot	3-4 Leaf Stage	7-8 Leaf Stage
	100-200 L/ha with 400 to 800 L/ha Water	100-200 L/ha with 400 to 800 L/ha Water

Nutrient Efficiency versus Soil pH

Element	pH 4.5	pH 5.0	pH 5.5	pH 6.0	pH 6.5
Nitrogen (N)	30%	43%	77%	89%	100%
Phosphorus (P)	23%	31%	48%	52%	100%
Potassium (K)	33%	52%	77%	100%	100%

Delivering Quality Produce

FERTILIZERS

Cal Mag & Boron™

Product Code: GG0024

The N : Ca ratio of 1 : 1 is perfect for plant establishment and during rapid cell division phases or periods of stress where both growth and cell strength needs to be maintained.

Magnesium maintains plant colour as it is a key component of chlorophyll production.

Both Magnesium and Boron aid in the translocation of Calcium to growing points. Boron is essential for the germination and viability of pollen.

Benefits of Cal Mag & Boron

- Soluble nutrients provide hassle free injection (no insoluble blockages) and rapid plant uptake
- High analysis provides for economic and efficient supply of nutrients and the capacity to reduce rates
- Maintains plant Ca : Mg ratios
- Boron to assist Calcium mobility
- Improves plant cell wall strength and fruit firmness
- Chloride free

Guaranteed Analysis

Nitrogen (N)	12.4%
Calcium (Ca)	12.3%
Magnesium (Mg)	3.4%
Boron (B)	0.2%
Specific Gravity	1.47 - 1.50 kg/L
pH	2.0 - 3.0

Typical Application Rates

General Foliar:

5 to 10 L/ha

Horticulture use 200 to 2,000 L/ha water

Broadacre use at least 100 L/ha water

Fertigation:

10 to 100 L/ha

> “SLTEC® Cal Mag and Boron is a perfect fit for our premium lettuce programs.
> **John Frisina - Landmark VIC**

> “Cal Mag & Boron driving quality strawberry production.
> **Peter Morrison - Roberts Ruralco, TAS**

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High Plant Availability Blend

Veggie Boost

High plant availability blend, when applied as a foliar with the correct nutrient balance will give grower control over crop growth as well as delivering the required nutrient ratios.

Designed for fast growing crops and growing conditions where base fertilizers are to slow or lack of control on nutrient release.

Plant tissue analysis is a valuable aid in crop management. Alone, it can be used for making fertilizer recommendations for certain crops.

For other crops, plant tissue analysis in combination with soil test information is the recommended approach for diagnosing nutrient deficiencies and determining fertilizer requirements.

Guaranteed Analysis

Nitrogen (N):	5.7%
Potassium (K):	5.9%
Calcium (Ca):	3.7%
Magnesium (Mg):	0.9%
Boron (B):	0.1%
Specific Gravity:	1.22 - 1.24 kg/L
pH Range:	4.0 - 6.0

Typical Application Rates

Foliar:

2 to 15 L/ha

Horticulture use 200 to 2,000 L/ha water

Broadacre use at least 100 L/ha water

Fertigation:

10 to 80 L/ha

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Maximise Your Crop's Potential

FERTILIZERS

Crop Booster Plus™

Product Code: SNPK0044

Benefits of Crop Booster PLUS™

- High phosphorus; drives plant energy production (ATP) and sugar movement. Crop Booster PLUS is designed to improve yield and protein in cereals and sugars and colour in fruit crops.
- Potassium promotes; sugar transportation, protein formation, water movement, fruit sizing and improves shelf life and disease tolerance.
- Calcium in combination with phosphorus stimulates (ATP), improves cell wall strength, seed and fruit quality, and shelf life.
- Ammonium nitrogen aids phosphorus uptake and metabolism and transportation of anions.
- Essential secondary and trace elements such as magnesium, manganese, zinc, copper and molybdenum drive enzyme pathways essential for chlorophyll and pigment production, protein synthesis, respiration and growth.
- Boron assists in; calcium metabolism and in synergism with molybdenum, it enhances plant metabolism, nitrogen assimilation and sugar transport.

Guaranteed Analysis

Nitrogen (N)	5.0%
N as nitrate	2.1%
N as ammonium	1.8%
Phosphorus (P)	15.0%
Potassium (K)	2.1%
Calcium (Ca)	4.0%
Magnesium (Mg)	0.2%
Manganese (Mn)	0.4%
Zinc (Zn)	0.4%
Copper (Cu)	0.5%
Molybdenum (Mo)	0.008%
Boron (B)	0.05%
Fulvic Acid	0.5%
Specific Gravity	1.31 kg/L
pH	< 2.0

Typical Application Rates

Foliar

2 to 10 L/ha
Horticulture use 200 to 2,000 L/ha water
Broadacre use at least 100 L/ha water

Fertigation

10 to 80 L/ha

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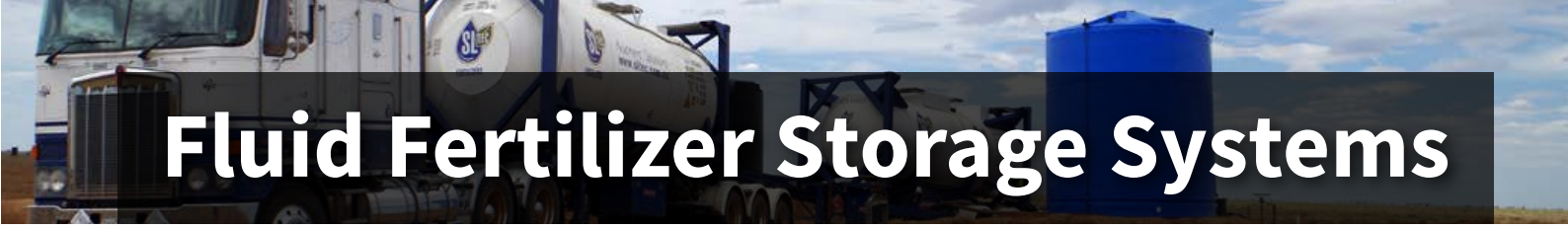


Fluid Fertilizer Storage Systems

The team at SLTEC® have conducted extensive research into storage and handling systems and can assist you designing and implement your liquid nutritional program.

Well designed fluid fertilizer storage and injection systems are essential to ensuring your fluid inputs are effectively utilized, to maintain your workforce safety and to minimize environmental impacts.

SLTEC Fluid Fertilizer Tanks

(Rental Plans available)

Free Standing 32,000 L Tank

Poly Tank complete with:

- Manhole & safety lid
- Banjo fertilizer resistant fittings
- 3” camlock infill / outlet and air vent assemblies
- Stainless steel sight gauge assembly
- Bottom sump & 1” drain valve enabling 100% drainage
- Strong poly base to support and fittings

Free Standing 10,000 L Tank

Poly Tank complete with:

- Manhole & safety lid
- Banjo fertilizer resistant fittings
- Sight gauge ¾”
- Tank height is designed to fit under Centre Pivot centre

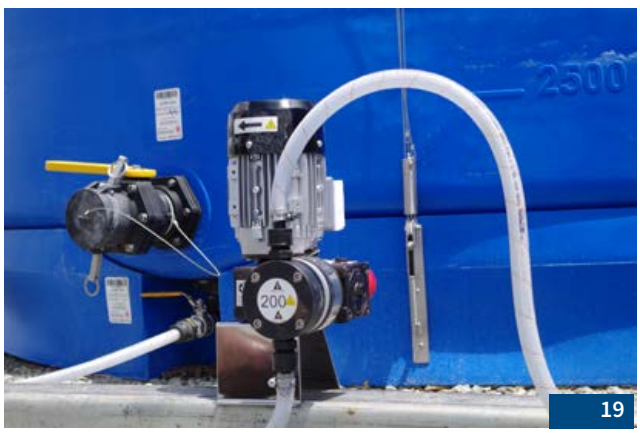
This tank is available for purchase.

Header Tanks for Liquid Run Fertilizer

- Poly tank and lid
- Stainless steel float assembly with poly ball float
- 1” fertilizer resistant camlock fittings with hose supplied

Fertilizer Injection Pumps

- Triangle Multifertic Electric Fertilizer Injection Pumps
- Standard pump 60MF-200 (200 ltr/hr single piston head)
- Standard motor 3 Phase
- Flow Rate adjusted manually from 0-100% via thumb wheel



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