

Quality Ingredients
Australian Made
Family Owned



FERTILIZERS

Nutrient Solutions

Liquid Inject Handbook

A green tractor is pulling a red liquid injector through a field. The injector is a large, multi-wheeled machine with a tank on top, designed for applying liquid fertilizers. The field is a mix of brown and green, suggesting a crop that has been partially harvested or is in a different stage of growth. The background shows a flat landscape under a clear sky.

Understanding a crop's nutritional requirements is critical to success

sltec.com.au

Images supplied by Liquid Systems (SA) world leaders in liquid delivery systems.

Table of Contents

- 1 Front Cover
- 2 Contents
- 3 Why Liquid Inject Fertilisers?
- 4 Nitrogen & Phosphorus Options
- 5 Nitrogen & Phosphorus Options
- 6 Nutrient Removal Data
- 7 Nitro Trace Range
- 8 Complex Trace Range
- 9 Maximise Range
- 10 Compatibility
- 11 The Law of Minimum
- 12 Back Cover



Why Liquid Inject Fertilisers?


As summarized from liquidsystems.com.au there are many reasons to be using fertilizers and similar inputs at sowing time via a liquid injection system. The below table outlines benefits.

LIQUID INJECTION APPLICATIONS & BENEFITS

Application	Benefits
Liquid Fertilizers Variable rate, multiple product fertilizer application	Provides operational efficiencies compared to spreading or in furrow granular. Reduced risk, \$\$\$ savings from not spreading fertilizers pre sowing.
Micronutrients Apply micronutrient solutions in furrow when seeding.	Treat deficiencies or lock up of micronutrients in the soil before they impact crop health. Overcome Herbicide Burden in Soils causing lock-up of micronutrients. \$\$\$ savings from reduced spraying requirements during growing season. \$\$\$ crop yield improvement.
Inoculants for Legumes In furrow, with the seed application of inoculants with water when sowing legumes.	Much simpler operation than treating seed prior to sowing. Generally more effective than seed treatments in adverse conditions. Better germination rates than seed treatments. \$\$\$ savings through reduced seed rates required. Increased residual soil nitrogen for follow-on crops.
Soil Wetters Apply soil wetters in furrow or surface band at seeding.	\$\$\$ yield improvements from improved rainfall harvesting and water use efficiency. Non-wetting soils become viable and productive cropping land.
Soil Conditioners Apply a variety of liquid solutions to improve soil characteristics.	Improve soil properties such as water harvesting, structural stability, nutrient availability, nutrient retention, pH and EC.
Nitrogen Stabilisers Addition of nitrogen stabilisers to liquid nitrogen fertilizers injected in furrow.	Inhibit loss of N through reduced nitrification and volatilisation. \$\$\$ Savings through reduced nitrogen fertilizer requirement throughout the season.
Multiple Liquids, Varying Soil Depths Independent rate control of multiple liquids, delivered at different locations in the soil profile.	Optimise placement of different products to get best usage. Independent rate control of separate liquids delivers input usage efficiencies. Avoid seed toxicity issues by appropriate separation of fertilizers from seed.
Section Control Mapping based section control shuts sections of the planter or seeder on and off to maximise use of land and avoid overlaps.	Optimise land use on irregularly shaped paddocks. Increase input efficiency by reducing overlaps and gaps. \$\$\$ savings and yield improvements.
Variable Rate Mapping Use historic map based yield, input application and soil analysis data to define optimised input application maps. Use precision ag systems to deliver inputs as mapped.	Optimise return on inputs. \$\$\$ savings.
Direct Injection Directly inject neat chemicals into a main stream	Avoid chemical wastage from tank mixing. Overcome some incompatibilities by avoiding tank mixing. Independent rate control of injected chemical provides flexibility and input use efficiency.

Nitrogen & Phosphorus Options

Code	Product Name	N	P	K	S	Ca	Mg	Mn	Zn	Cu		Mo	B	Fe	Co	C	Fulvic Acid	Fish Hydrolysate	Humic Acid	Kelp	Molasses	Extended	SG	pH
Nitrogen Options		N	P	K	S	Ca	Mg	Mn	Zn	Cu		Mo	B	Fe	Co	C								
GG0017	UAN™	42.5	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	N as NH ₃ 10.6%, N as NO ₃ 10.6%, N as urea 21.3%	1.320	6.0 - 7.0
GG0178	UAN + Zn & Cu™	40.6	-	-	-	-	-	-	1.0	0.2		-	-	-	-	-	-	-	-	-	-	N as NH ₃ 10.0%, N as NO ₃ 10.5%, N as urea 20.1%	1.332	3.5- 5.5
GG0179	Winter Boost™	38.5	-	-	-	2.2	-	0.1	0.2	0.05		-	-	-	-	-	-	-	-	-	-	N as NH ₃ 9.2%, N as NO ₃ 10.9%, N as urea 18.4%	1.346	2.0- 4.0
GG0066	UAS™	26.6	-	-	6.7	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	N as NH ₃ 5.7%, N as urea 20.9%	1.235	4.0- 7.0
CB0029	26-0-0 + SZC™	25.9	-	-	6.7	-	-	-	0.2	0.1		-	-	-	-	-	-	-	-	-	-	N as NH ₃ 5.6%, N as urea 20.3%	1.236	4.0- 5.0
GGCB0370	UAS + ZC™	25.0	-	-	6.3	-	-	-	0.3	0.1		-	-	-	-	-	-	-	-	-	-	N as NH ₃ 5.5%, N as urea 19.5%	1.232	2.0- 5.0
GGCB0128	UAN & Cal Nitrate (45:55 w/w)™	27.2	-	-	-	9.6	-	-	-	-		-	-	-	-	-	-	-	-	-	-	N as NH ₃ 5.1%, N as NO ₃ 11.9%, N as urea 10.2%	1.406	6.5 - 7.0
GGCB0129	UAS + 1% Zn™	27.3	-	-	6.7	-	-	-	1.0	-		-	-	-	-	-	-	-	-	-	-	N as NH ₃ 5.9%, N as NO ₃ 0.4%, N as urea 20.9%	1.263	7.0 - 8.0
SSCB0022	UAS P™	23.9	2.8	-	5.5	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	N as NH ₃ 6.7%, N as urea 17.2%, P as PO ₄ 2.8%	1.246	4.0 - 7.0
Phosphorus Options		N	P	K	S	Ca	Mg	Mn	Zn	Cu		Mo	B	Fe	Co	C								
SS9001	SS 11:16:0™	11.3	16.0	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	N as NH ₃ 11.3%, P as PO ₄ 16.0%	1.297	6.0 - 7.0
SS9003	SS 10:14:0 + Zn™	10.1	14.0	-	-	-	-	-	0.8	-		-	-	-	-	-	-	-	-	-	-	N as NH ₃ 10.1%, P as PO ₄ 14.0%	1.276	6.5 - 7.0
SS9014	Brassica PopUp™	10.9	7.8	-	6.1	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	N as NH ₃ 10.9%, P as PO ₄ 7.8%	1.263	6.0 - 7.0
SSCB0015	Cotton QUAD™	1.1	12.3	5.2	-	-	-	-	0.5	-		-	-	0.01	-	-	0.1	4.0	3.3	4.0	4.0	N as NH ₃ 0.9%, P as PO ₄ 12.3%	1.308	2.0- 3.0
SNPK0040	Crop Booster PLUS™	5.0	15.0	2.1	-	4.2	0.2	0.4	0.4	0.5			0.05	-	-	-	0.5	-	-	-	-	N as NH ₃ 2.9%, N as NO ₃ 2.1%, P as PO ₄ 15.0%	1.319	< 2.0



Nutrient Removal Data

Below is a table showing the removal of trace element nutrients from major winter crops. By understanding the requirements as growers we can customize the blends to the most efficient possible and increase the return of investment.

	Kilograms (kg)	Grams (g)		
	Mg	Mn	Zn	Cu
Pulses				
Faba Beans	1.2	30	28	10
Lentils	0.9	14	28	7
Cereals				
Wheat	1.2	40	20	5
Barley	1.1	11	14	3
Oats	1.1	40	17	3
Oil Seeds				
Canola	3.1	43	59	5



Designed to be mixed with UAN without adding water

Nitro Trace Range

Nitro Traces are nitrate based; they are formulated to be mixed neat with any UAN formulation. This is a huge advantage to the grower as they mix will have a long shelf life and not require agitation saving time and improving efficiency.

SLTEC® Nitro Trace Range can be mixed with UAN / UAS without any worry of blockage.

Benefits of the Nitro Trace Range

- Developed to be mixed with UAN and other nitrate based liquids
- Cost efficient compared to oxides and sulphates
- Add trace elements to bulk UAN in the ratios you require
- Custom blend the trace element package you need for your farm
- Long-term storage without worry of “settling”
- Can be premixed with a bulk UAN order from SLTEC®

Nitro Z™ at 1 L/ha provides enough zinc for a 4 t/ha crop of wheat

Code	Name	N	Mg	Mn	Zn	Cu	B	Mo	Rates*
SNPK0057	Nitro Mag™	9.8	8.8	-	-	-	-	-	-
SNPK0058	Nitro Mang™	12.2	-	23.9	-	-	-	-	1 L/ha
SNPK0059	Nitro Z™	8.3	-	-	19.3	-	-	-	1 L/ha
SNPK0056	Nitro Cop™	10.0	-	-	-	22.7	-	-	0.5 L/ha
SNPK0066	Nitro ZC 4:1™	8.6	-	-	15.9	4.0	-	-	1 L/ha
SNPK0049	Nitro ZCM™	8.5	-	7.2	7.2	3.8	-	-	2 L/ha
SNPK0095	Nitro ZCMM™	9.4	2.5	3.6	9.7	1.4	-	-	2 L/ha
SNPK0052	Nitro ZMB™	6.1	-	5.4	7.8	-	1.9	-	2 L/ha
GGCB0311	Nitro MgZCMo™	9.5	6.5	-	3.9	1.2	-	0.1	2 L/ha



Maximise Yield with Efficient Nutrient Input

Complex Trace Range

The complex range is sulphate based, tried and tested nutrient formulation for liquid injection. The Complex brand can easily be co-mixed together and customized blends are easily available.

Trace element solutions for broadacre, horticulture and pasture systems.

- Cost effective & high performance trace solutions
- Rapid plant uptake due to high plant availability
- Custom blending available, make your own analysis

Complex Trace Range Product Options

Product Name	N	P	K	S	Mg	Mn	Zn	Cu	B	Fe	Mo	Co	FA
Mag Complex				6.6	5								
Manganese Complex				10.6		17.7							
Zinc Complex				8.1			16.4						
Copper Complex				3.4				6.7					
Boron Complex	6								14.7				
Fe Plus			0.1	4.7						8.1			0.5
Mo 250P		11									25		
MoBo Complex	6								14.7		0.3		
Moly-Balt		9.9		0.4							22.5	0.8	
ZC Complex 4:1				7.4			12	3					
Tri Complex				8.8		11.2	3.1	1.2					
ZMnC + Mo				6.9		5.1	6.3	1.5			0.1		
ZMC 9:4:1 + Mo Complex				7.8		4.4	9	1.3			0.1		
Cereal Complex	0.1			6	1.3	2.7	4.9	0.7	0.3		0.06		
TE 8 Plus			0.1	7.2	2.4	3.2	3.2	0.5	0.2	0.7	0.02		0.5
Nitro Combi TE			0.1	4.4	0.7	1.6	2.2	0.3	0.8	2.2	0.03		0.5

*FA = Fulvic Acid

EDTA Chelated Trace Elements for effective and efficient trace element applications



Maximise Range

EDTA Chelated Trace Elements

A premium offering of true EDTA chelates, for complicated blends with mixing issues you can't go past the Maximise range to Maximise your tank mixing efficiency.

* Not EDTA

Code	Name	N (% w/v)	K (% w/v)	Mg* (% w/v)	Mn (% w/v)	Zn (% w/v)	Cu (% w/v)	Mo (% w/v)	B* (% w/v)	Fe* (% w/v)	Fulvic Acid
SNPK0077	Mang Maximise				6.1						
SNPK0033	Zinc Maximise	2.7				6.5					
SNPK0063	Copper Maximise						6.0				
SNPK0060	Iron Maximise	1.8								6.0	
GG0188	Citrus Maximise	2.5			2.0	3.2			2.6		
GCCB0181	ZMnC Maximise	2.2			3.0	5.0	1.6				
GCCB0200	ZC 6:1 Maximise	2.4				5.5	0.9				
GCCB0318	ZC 3:3 Maximise	1.4				3.2	3.0				
SNPK0094	ZCMM Maximise		5.6		1.8	4.9	0.9	0.3			
SNPK0091	ZCBMo Maximise	2.5				4.7	1.2	0.5	1.2		
SNPK0096	Brassica Maximise	1.4			2.2	1.8				2.2	
SNPKCB75	Multi Maximise	1.6		0.5	1.1	1.5	0.2	0.02	0.6	1.5	0.4

Compatibility

When using liquid inject on planters, your confidence in the compatibility of the product is a major concern.

SLTEC have developed an online platform where anyone can request a free compatibility.

Simply add in your ag chemicals and the SLTEC product/s you want to use and send the request.

SLTEC will then come back to you with a laboratory test of your individual request with the outcome of physical compatibility.

Simply scan the QR Code to request your compatibility test today.

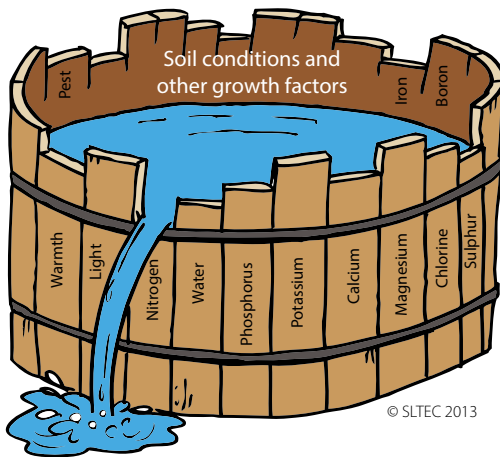


Law of Minimum

The Law of Minimum states that plant growth is determined by the scarcest, “limiting” nutrient; if even one of the many required nutrients is deficient, the plant will not grow and produce at its optimum.

Conventional fertiliser programs focus on macronutrients such as nitrogen, phosphorus and potassium (NPK), and occasionally sulphur. However, plants require a total of sixteen nutrient elements for optimal growth, with each required in different amounts. Therefore, if one of the essential trace elements – zinc, copper, boron, manganese, molybdenum, etc – is deficient from the soil, the plant will not perform at its optimum capacity and yield, and reproduction and immune function will diminish.

At SLTEC®, we have developed a range of trace elements that respond to the nutrient needs of your crops. Specific consideration is given to high plant availability and physical compatibility with a range of other fertilisers.





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