



In-Crop Nutrients for Pulse Crops 2021

Liquid fertilisers can provide valuable management tools for in-crop nutrient decisions.

1800 768 224 | enquiries@sltec.com.au | sltec.com.au

Why Choose SLTEC® Fertilizers?

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

Our Promise

Quality

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

Investment

SLTEC® Fertilizers will ensure that your fertiliser 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 Fertiliser?

- 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



Pulse Nutrient Deficiencies

Sulphur¹



Deficiency symptoms;

- Young leaves turn yellow
- Plants are small and thin

Copper¹



Deficiency symptoms;

- Symptoms do not appear until flowering
- Wilting and rolling of fully opened leaves
- New leaflets appear puckered or kinked

Zinc¹



Pulse crops can be very responsive to zinc applications. Adequate phosphorus levels are required for optimal zinc uptake.

Deficiency symptoms;

- Small plants and delayed maturity
- Yellowing of areas between veins
- Yellowing of lower leaves

Manganese¹



Deficiency symptoms;

- New leaves show chlorosis, followed by dead spots or purple spotting
- Leaves can turn yellow and die

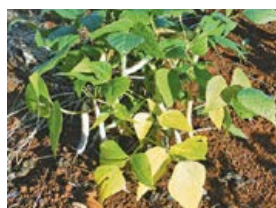
Boron¹



Deficiency symptoms;

- Reduction in growth
- Browning, shortening and thickening of roots on lateral extremities
- Waxy appearance of leaves and darkened colour
- Shortening of stem internode

Cobalt²



Cobalt is required for nitrogen fixation, therefore leguminous plants with cobalt deficiency will regularly develop symptoms of nitrogen deficiency due to inadequate vitamin B12 synthesis.

Deficiency symptoms;

- Yellowing and stunted crop growth

¹ GRDC GROWNOTES. (2017).

² Nutri-Facts No. 15 Cobalt. (n.d.). IPNI. <https://ipni.net>

Maximise Your Crop's Potential



ZCMn Complex™

Product Code: SNPK0081

ZCMn Complex™ is a cost effective multi trace blend designed specifically for Wimmera - Mallee conditions.

Benefits of ZCMn Complex™

- Balanced three way trace element, designed for Mallee conditions
- Zinc is essential for carbohydrate metabolism and enzyme activation, deficiency symptoms include interveinal chlorosis and stunted crops
- Copper is essential for energy transfer and helps regulate water movement, deficiency may appear as tip burn in cereals
- Manganese is essential for chlorophyll production and photosynthesis. Deficiencies can be seen as chlorosis and may appear as small brown-black spots
- Can be used as a liquid injection or as foliar applied
- Compatible with Loveland Awaken

Guaranteed Analysis (w/v %)

Sulphur (S)	7.6%
Manganese (Mn)	3.5%
Zinc (Zn)	9.9%
Copper (Cu)	1.3%
Specific Gravity	1.345 kg/L
pH Range	2.0 - 3.0



Rev up your rhizobia with

Moly-Balt™

Product Code: SNPK0092



Guaranteed Analysis (w/v %)

Molybdenum (Mo)	22.5%
Cobalt (Co)	0.8%
Phosphorus (P)	9.9%
Sulphur (S)	0.4%
Specific Gravity	1.541 kg/L
pH Range	3.5 - 4.5

Typical Application Rates

Foliar:

40 - 150 mL/ha as required
Horticulture use 200 - 2,000 L/ha water
Broadacre use at least 100 L/ha water

Directed Soil Spray:

50 - 100 mL/ha
prior to planting or banded under canopy

SLTEC® Moly-Balt™ contains a balance of molybdenum and cobalt, essential for nitrogen fixation of rhizobia on pulse crops. Without an ample supply of cobalt and molybdenum, your crop's root rhizobia may not function correctly and hence lose yield.

Why Cobalt?

The best-known function of cobalt in plants is for N-fixing micro-organisms, such as rhizobia, which live symbiotically with legume plants. In N-fixing bacteria, cobalt is a vital component needed to synthesize vitamin B12, which is necessary to form hemoglobin. The hemoglobin content in legume root nodules is directly related to successful N fixation.¹

Cobalt is necessary for nitrogen (N) fixation occurring within the nodules of legume plants.¹

"Cobalt is essential in animal nutrition for the synthesis of vitamin B12. Where animal Co deficiencies occur, mineral supplements can be provided to animals, or crop fertilization with Co can be useful."¹

Why Molybdenum?

Legumes: The symptoms of insufficient Mo include general stunting and yellowing, typically seen as a result of insufficient N supply. Root nodules are green and small.¹

These Mo-enzymes are involved in the regulation of nitrogen (N) nutrition. In non-legumes, nitrate reductase regulates the conversion of nitrate into bioactive forms. The Mo requirement of legumes is greater than that of grasses and other crops, as an additional Mo-enzyme (nitrogenase) is required by the root nodule bacteria for N fixation. Canola also has a relatively high demand for Mo, requiring 5 - 6 times more Mo than cereals.¹

Benefits of Moly-Balt™

- A blend of two essential nutrients required for optimal nitrogen-fixing bacteria to function.
- Readily crop available nutrients that can be seed, foliar or soil applied.
- Compatible with a wide range of common ag chemicals, allowing for tank mixing and co-applying in a single pass.

References

1. <http://www.ipni.net/publication/nutrifacts-na.nsf/>

Unleash plant potential with a combination of responsive key trace elements



Maximise Zn-Cu-B-Mo™

Product Code: SNPK0091

- Fully chelated zinc and copper together with boron and molybdenum in complex forms allows high plant availability, very low phytotoxicity risk and a broad range of ag-chem compatibility.
- Conveniently supplies four key micronutrients that are often found to be deficient in one product.
- Highly plant responsive through in crop application, improving plant health, yield potential and crop quality.
- Supplies key nutrients that are of critical importance in the lead up to the reproductive growth stage. Research has found a responsive synergy between boron, zinc and molybdenum at pollination in certain crops.
- Zinc and copper in a commonly desirable 4:1 ratio suitable for a variety of crops.

Copper's function in the plant

- Activates certain enzymes in plants involved in lignin synthesis.
- Essential in several enzyme systems.
- Essential in the process of photosynthesis, plant respiration and assists in plant metabolism of carbohydrates and proteins.

Zinc's function in the plant

- Activates enzymes that are responsible for the synthesis of certain proteins.
- Used in the formation of chlorophyll and some carbohydrates, and conversion of starches to sugars.
- Its presence in plant tissue helps the plant withstand cold temperatures.

Boron's function in the plant

- Important in pollination and seed reproduction.
- Maintains a balance between sugar and starch.
- Essential for proper cell wall formation.
- Plays a vital role in the proper function of cell membranes and the transport of potassium to guard cells for the control of internal water balance.

Molybdenum's function in the plant

- Functions in converting nitrates (NO₃) into amino acids within the plant.
- Essential to the symbiotic nitrogen-fixing bacteria in legumes.
- Essential to the conversion of inorganic phosphorus into organic form.

Guaranteed Analysis (w/v)

Nitrogen (N)	2.5%
N as ammonium	2.0%
Zinc (Zn)	4.7%
Copper (Cu)	1.2%
Molybdenum (Mo)	0.5%
Boron (B)	1.2%
Specific Gravity	1.206 kg/L
pH Range	7.5 - 8.5
Chelation Mechanism	EDTA

Typical Application Rates

Foliar:

1.25 - 6.25 L/ha
Horticulture use 200 to 2,000 L/ha water
Broadacre use at least 100 L/ha water

Foliar (Tree Crops):

5 - 10 L/ha
Horticulture use 200 to 2,000 L/ha water

Fertigation:

5 - 12.5 L/ha



Fluid Fertiliser Storage Systems

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

Well designed fluid fertiliser storage and injection systems are essential to ensuring your fluid inputs are effectively utilised, to maintain your workforce safety, and to minimise environmental impacts.

SLTEC® Fluid Fertiliser Tanks



Cone Bottom Tanks

Features include:

- 12,000 litre tank that completely drains
- Rated for all SLTEC® Fluid Fertilizers (up to specific gravity of 1.9 kg/L)
- Easy to relocate with standard farm machinery
- Arrives setup and ready to use, fitted with 2" banjo fittings
- Clear sight gauge strip providing a safe and accurate volume indicator
- Cone-bottom design will allow the tank to empty completely.
- **Note:** Also available in double and triple configuration on an axle to make transportation between farms easy

Free Standing 32,000 L Tank

Poly Tank complete with:

- Manhole & safety lid
 - Banjo fertiliser 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
- Tank available for purchase or rental.



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