



## S-Chelate Cultiv- 8



### Foliar Powder



Element	Quantity
Boron (B)	0.6% minimum
Copper (Cu)	0.4% minimum
Iron (Fe)	3.5% minimum
Magnesium (Mg)	2.1% minimum
Manganese (Mn)	2.1% minimum
Molybdenum (Mo)	0.17% minimum
Sulphur (S)	6% minimum
Zinc (Zn)	1.0% minimum

These are the levels quoted as elements not as an oxide or any other compound.

Shown on the CoA for each batch and illustrates the strong resistance to alkaline soil conditions and high level of bioavailability.

### Level of Chelation

Precipitation Point pH 11 minimum.

Measured on each batch and key to the tolerance to alkaline soil conditions and high level of bioavailability.

### Particle Size Distribution

Volume Weighted Mean – 250 microns

50% under 204 microns

### Appearance

### Bulk Density

### Packing

Pale Green Powder

0.82 g/cm<sup>3</sup>

20kg PE lined steel drum

# Field Cereal Crop Application Guide Rates

(For use alongside NPK plant macronutrients)

For each foliar application:	
Maintenance Rate	0.2-0.3kg/ha
Moderate Deficiency	0.3-1.1kg/ha
Severe Deficiency	>1.1kg/ha

The application rate will vary depending on the crop and application regime and you may for example prefer fewer applications and apply up to double the guide amount for each application.

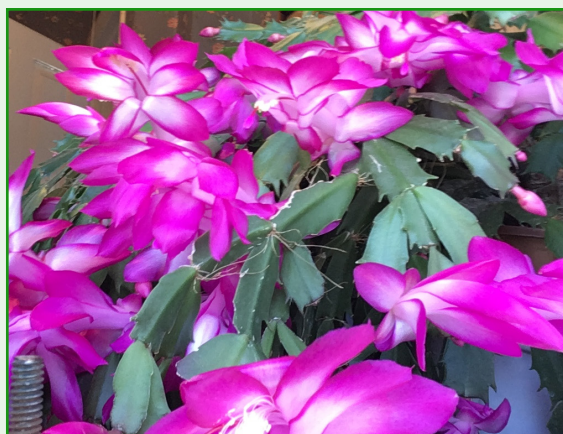
Due to the escalated uptake, we recommend you perform tissue tests to determine the optimum application rate and optimise your costs.

As a guide dissolve the above amounts in 200 litres of water to apply over one hectare. However, the guide application quantities are easily soluble in smaller volumes of water or can be dissolved in larger volumes as long as there is sufficient stirring to ensure it has diffused evenly throughout the mixing tank in the greater volume.

## Application Timing

**Preventive:** Apply at early stage after establishment of the seedlings, at 4-6 leaves stage.

**Remedial:** Start at first sign of micronutrient deficiency; apply 2 additional sprays at 10-15 day intervals.



Flowering Cactus - 3 times the flowerheads

## Under-Cover, Controlled Growing Systems

S-Chelate Cultiv-8 is ideal for use in drip fertigation polytunnel fruit growing systems where their pH range can overcome the locking up of nutrients which can be caused by growing media like coconut coir.

S-Chelate Cultiv-8 is perfect for use in vegetable and herb hydroponic systems where the pH range tolerates other chemicals like hydrogen peroxide used to control pathogens in this intensive, high volume growing environment.

## Small Scale Allotment, Garden Indoor Plants

S-Chelate Cultiv-8 has been formulated as a wide spectrum, general purpose plant micronutrient package which been found to be just as effective for small scale growers, indoor and outdoor gardeners.

Please contact us for guide application rates.



Brown Turkey figs – crop tripled with S-Chelate Cultiv-8 plus NPK

## Product Features

**S-Chelate Cultiv-8** has a unique chelate chemistry that transports the cations of these important elements into the plant with remarkable effectiveness.

**S-Chelate Cultiv-8** is bioavailable in a much broader-than-normal range of pH and soil conditions such as in contact with clay, carbonates, phosphates, organic matter and other elements in the soil that seek to tie up and make secondary elements and micronutrients insoluble.

This wide pH tolerance is equally useful in controlled growing systems like horticultural drip fertigation polytunnel systems where media like coconut coir can tie up micronutrients like iron and copper and hydroponic systems where tolerance to chemicals like hydrogen peroxide is needed which may be used to prevent pathogens from developing in this highly intensive growing environment.

Chelation is defined as the capacity to hold the metal ion in solution above the precipitation point of the non-chelated ion and the Level of Chelation measurement is your assurance of the performance of our product which will stand up to independent verification.

This is the backbone of the performance of this technology resulting in markedly lower application rates than for non-chelated products because so much more of the metal ion will stay in solution and reach the plant tissues as has been shown convincingly by yield and quality improvements alongside parallel tissue analysis.

### There are two ways this works:

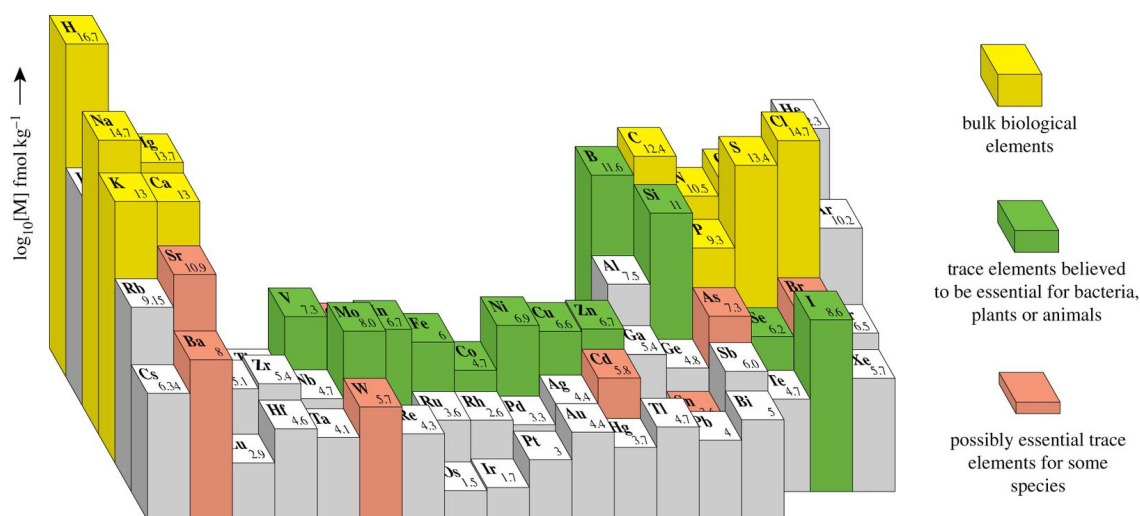
#### **1) In the growing medium**

Protecting the vulnerable cationic metal ions from being tied up and allowing them to reach and be absorbed by the root hairs.

#### **2) In the plant**

Carrying them in a more biologically compatible way to the regions of the plant where they are needed. Chlorophyll is a chelate structure so the plant's phloem system recognises S-Chelates as organic molecules with familiar structures, enabling them to be transported and assimilated more readily than traditional unchelated mineral salts.

S-Chelate Cultiv-8 reduces deficiencies through its optimum combination of essential micronutrients and provides a useful package of major micronutrients essential to plant metabolism throughout the growth and development cycle.



Manganese (Mn) is an essential plant mineral nutrient, playing a key role in several physiological processes, particularly photosynthesis. Manganese deficiency is a widespread problem, most often occurring in sandy soils, organic soils with a pH above 6 and heavily weathered, tropical soils. It is typically worsened by cool and wet conditions (Alloway 2008). Numerous crop species have been reported to show high susceptibility to Mn deficiency in soils, or a very positive response to Mn fertilization, including cereal crops (wheat, barley and oats), legumes (common beans, peas and soybean), stone fruits (apples, cherries and peaches), palm crops, citrus, potatoes, sugar beets and canola, among others. The impact of Mn deficiencies on these crops includes reduced dry matter production and yield, weaker structural resistance against pathogens and a reduced tolerance to drought and heat stress.

Manganese has a relatively low phloem and as a result, typical leaf symptoms of first develop in younger leaves. The critical Mn deficiency is generally below 20 ppm fully expanded, young leaves. In the case deficiency first results in pale mottled leaves, typical interveinal chlorosis.

Under severe Mn deficiency dicots may also develop a number of brownish spots. In cereals, Mn deficiency can cause pale green or yellow patches in younger leaves. This condition is known as grey speck, and is characterized by necrotic spots that form in older leaves.



## Chlorosis

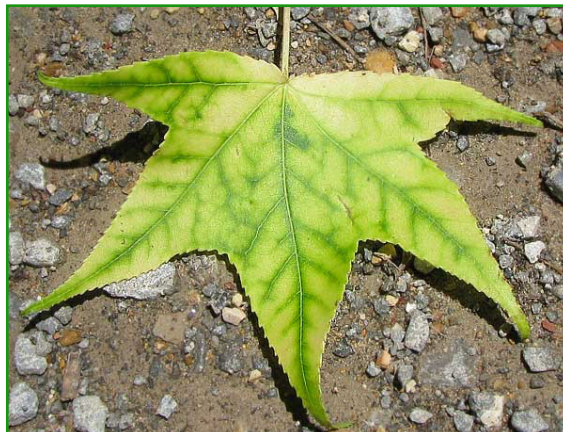
Chlorosis is commonly caused by an inability to synthesise sufficient chlorophyll which can be caused by poor nutrition including a deficiency of Iron, Magnesium and Zinc.

Karnataka J. Agric. Sci., 24 (1) : (106-109) 2011

All of the elements in **S-Chelate Cultiv-8** have been identified as essential to photosynthesis.

References:

Interaction of micronutrients with major nutrients with special reference to potassium UJWALA RANADE-MALVI  
Institute for Micronutrient Technology, Pune - 411 048, India  
Email: info@imttl.com



A Liquidambar leaf with interveinal chlorosis

S-Chelate powders are compatible with most liquid fertilizers, herbicides, insecticides, and fungicides, however please jar test before mixing with other agrichemicals.

Guide application rates produce very dilute solutions of 0.2-2% but due to using conditions varying widely we always recommend trialling before adopting widely and cannot accept liability for damage or underperformance.

**Please contact us or our agents for technical support.**

**Achieve greater yields with Super Bioavailable S-Chelate™ Technology**

**Chemistry not Mystery**

**Made in the UK**

**Get in touch**

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