ENGAGE
The Power of Nutrition

Fortify Maxx™

Fortify Maxx is a solution of chelated Copper, Zinc and Manganese combined with natural Phenophite extracts created specifically to support plants through periods of stress.

Fortify Maxx's blend of organically chelated nutrient and extracts support the important process of synthesis of phenolic substances and phytoalexins by plants to reduce susceptibility to various crop stresses.

Fortify Maxx used continually via irrigation or a regular foliar application and will supply optimal levels of Copper Zinc and Manganese.

Fortify Maxx stimulates vascular flow to aid nutrient and water movement.

Fortify Maxx can be classed as fully organic and as such will all be used by the plant and will not create any residues.

CROPS

Most agricultural and horticultural crops including:

- Brassicas
- Leafy Salads
- Potatoes
- Carrots/Parsnips
- Legumes
- Fruiting Vegetables
- Top Fruit
- Stone Fruit
- Vines
- Citrus Fruit
- Soft Fruit
- Ornamentals

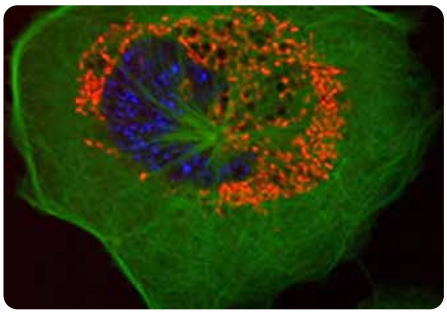
Guaranteed Analysis

	w/w	w/v
Copper (Cu) water-soluble:	1.50	1.88
Manganese (Mn) water-soluble:	0.50	0.63
Zinc (Zn) water-soluble:	0.50	0.63

The Role of Copper, Zinc and Manganese

The Role of Copper

- Copper is a trace element which is involved in several enzyme systems and also in photosynthesis. It is not normally very mobile within the plant.
- It plays a major function as a catalyst in photosynthesis and health restoration within the plant.
- It is a constituent of several enzyme systems involved in building and converting amino acids to proteins. It is important to the formation of lignin in plant cells which contributes to the structural strength of the plant cell. Its role in the strengthening of cell wall can have inferences for the plant's survival when it is exposed to stress conditions.



Cell with oxidative stress

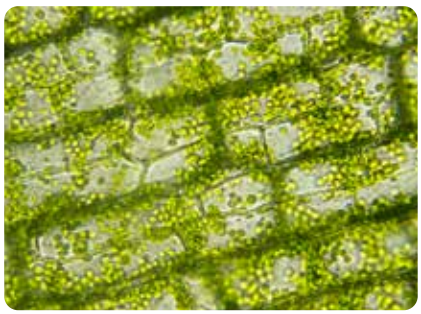
- Copper plays an important role in reducing oxidative stresses. It has the potential to act as a catalyst in the formation of free radicals but it also plays a role in reducing reactive oxygen species compounds in cells.
- Copper affects the flavour, the storage ability and the sugar content of fruits.

The Role of Zinc

- Zinc is essential for the production of auxins, an essential growth hormone.
- Zinc activates enzymes in protein synthesis, plus it is involved in the regulation and consumption of sugars. It is also necessary for the formation of chlorophyll and carbohydrates.
- Zinc is proven to moderate the activity of some enzymes under abiotic stress conditions such as water/drought stress.
- Zinc influences the rate of seed and stalk maturation and aids starch formation and root development.
- The presence of adequate amounts of zinc in the tissue enables plants to withstand lower air temperatures.

The Role of Manganese

- Manganese is a trace element which is essential for many plant functions, particularly enzyme systems.
- Manganese is involved in photosynthesis and change of leaf colour is often the first visual symptom of deficiency.
- Manganese helps with the assimilation of carbon dioxide in photosynthesis (turning light into energy), it aids in the synthesis of chlorophyll and nitrate assimilation.
- It is essential in the formation of riboflavin (B2), ascorbic acid (antioxidant properties) and carotene (contributes to photosynthesis by transmitting the light energy that plants absorb from chlorophyll).
- Manganese (Mn) supported compounds are know to reduce the negative stress effect on cells caused by drought, harsh temperature, and salinity.
- In response to stress, an adequate supply of Mn has shown to induce the production of Mn superoxide dismutase at the gene level to quickly help breakdown reactive oxygen species production, and stimulate manganese-dependent proteins to maintain cell integrity.



Healthy cellular function

What are Phenophites and what do they do?

Phenophites is a generic term for natural plant extracts that stimulate the production of greater levels of phenolic compounds. Phenolic compounds are a group of metabolites derived from the secondary pathways of plants. They comprise flavonoids, phenolic acids, camalexins, tannins, lignans, and coumarins, compounds naturally found in fruits, vegetables, cereals, roots, and leaves among other plant products. Research over the last 30 years has proven the stimulation of secondary plant pathways can aid plants to limit damage from oxidative stress, phosphites being the just one example from within the Fortify range. Fortify Maxx takes this research further by using natural extracts rather than inorganic substances. New research across the world suggests that naturally elevating production of these compounds has further potential health benefits to plants, working as antioxidants against oxidative stresses such as low or high temperature, deficient or excessive water, high salinity, heavy metals, and ultraviolet radiation and pathogenic pressure.

The Phenophites in Fortify Maxx work in conjunction with nutrient package to significantly reduce the effects of these stresses on plants growth and development.

Crop	No of Applications	Timings	Rate litres per ha
Cereals	3-4	Apply foliarly at flag leaf stage and repeat every 14 days or at first signs of increased abiotic and biotic pressure.	1.5-2.0
Oilseed Rape	3-4	Apply foliarly at first signs of Inflorescence emergence or during periods of abiotic/ biotic pressure.	1.5-2.0
Brassicas	3-4	Apply foliarly at head formation and repeat every 14-21 days.	1.0-2.0
Leafy Salads	2-3	As foliarly required from tissue analysis. Repeat at 14 day intervals.	1.0-2.0
Potatoes	2-5	As foliarly as required from tuber initiation. Repeat as necessary at 14 day intervals.	2.0
Legumes	3-4	Apply foliarly from 10-15cm stem height at 14 day intervals.	1.0-2.0
Tree Fruit	2-3	Apply foliarly from petal fall at 14 day intervals and repeat as necessary depending upon growing conditions.	2.0-2.5
Soft Fruit	8-9	Apply via irrigation from planting in feed solution throughout the growing season every 7-14 days.	2.0
Ornamentals	8-9	Apply via irrigation in feed solution throughout the growing season every 7-14 days, or foliarly every 14 days as required.	2.0-2.5
Sports/ Amenity Turf	As required	Apply foliarly throughout the growing season every 14 days to reduce susceptibility of abiotic/biotic stress.	2.0

Compatibility

Fortify Maxx is compatible with most known fertilisers and plant protection products. As Fortify Maxx is predominantly organic, it is always advisable when adding to new products or multiple product mixes to perform a jar test.

Water recommendation: 200-1000lts per hectare depending upon crop requirement.

*For more detailed application rates per crop, please visit **engagecropsolutions.com** or speak to an Engage advisor.*

Always read the label before use.

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