



# Frost Protection Heat Protection Disease Protection

## HEALTHY PLANT GROWTH

### Ectol the Bio-Protectant

- Boosts the plants natural stress response mechanism, when exposed to Frost, Heat and Saline stress.

### Ectol the Bio-Elicitor

- Improves the plants Tolerance and Resistance to fungal and bacterial disease.

### Ectol the Bio-Stimulant

- Optimises healthy plant growth, especially when constrained by external conditions.

### Ectol contains:

Extracts of Kelp	Soluble organic sugars
Potassium	Complexed Amino acids
Chelated Trace elements	Bio-elicitors

### How Ectol Works:

*Ectol* contains “osmoprotectants” naturally found in many plants, but importantly is found in high concentrations in kelp as they protect the kelp from low temperatures and salt. Under conditions of stress, including frost, drying winds or high salt concentrations, the osmoprotectants protect plant proteins and strengthen plant resistance. Although all plants produce osmoprotectants, the quantities available, or the cell responsiveness, may not provide sufficient protection when the plant is exposed to a sudden over night frost. The kelp osmoprotectants in *Ectol* boost the plants own stress protection.

*Ectol* contains kelp plant growth regulators known as auxins and cytokinins. Plant growth regulators stimulate growth at extremely low concentrations and may compensate the plant when stressed by cold or hot conditions. Additionally these regulators will stimulate root growth and influence fruit set, colour and keeping quality.

*Ectol* contains organically chelated Potassium which maintains cell wall turgidity and lowers the freezing point of cell contents, protecting the plant when exposed to frost, chilling or drought conditions.

*Ectol* contains specific chelated trace elements, critical to the production of lignin and phenols, essential for the plants protection against fungal and bacterial pathogens.

*Ectol* contains a range of sugars, mono and polysaccharides and oligosaccharides (polymer sugar derivatives). The oligosaccharides are shown to play a pivotal role in pest and disease resistance, especially “Systemic Acquired Resistance” (SAR), Sorbitol, mannitol and laminarin, have a stress response and frost protection role as well as providing “food” for the beneficial soil bacteria and fungi, whose biological processes recycle plant nutrients, improve soil structure and help plants combat disease.

*Ectol* contains plant phenolic compounds, associated with disease and fungal resistance in plants and animals and discourages the activity of sucking insects on plants.

## Ectol - recommended foliar frost resistance and growth promotant programme

**Tree Crops:** Apples, Pears, Stone Fruit, 7.5 L/ha applied every 10 days, commencing at “pink” with apples and 50% full bloom of stone fruit. Maintain this programme while the risk of frost persists.

**Grape Vines:** At day 1, “First Leaf,” apply 5.0L/ha, increasing to 6L/ha on day 10, day 20 and day 30, increasing to 7L/ha on day 40.

**Vegetables, cereal crops and hydroponics:** For seasonal crops apply up to 15L/ha as split applications.

### Potatoes:

To increase number of tubers

Apply one or two applications at 3-4 L/ha each starting one to two weeks before tuber initiation.

As a general nutrition supplement

Suggested minimum application 10L-15L/ha spread over three to four applications starting 3 weeks after tuber initiation.

To delay dying off particularly if blight is present

Apply up to 10 L/ha in each of 3 applications in the late stages of growth.

**Dilution Rates:** Dilute with water at rates of 1:20 to 1:40. (E.g. 7.5L/ha add to 300 L water)

**Compatibility:** Ectol may be mixed into most pesticides, including copper and sulphur sprays, by addition to the diluted spray tank. Ectol may also be mixed with foliar fertilisers, except Calcium which may form a precipitate.

**Pack Size:** 200L and 20 L drums