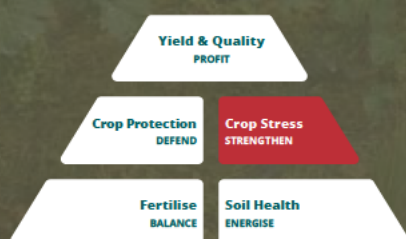


Super Kelp

Superior Growth Stronger Plants



Stress Tolerance - heat and frost

Activity

- Increased chlorophyll production
- Increased root growth
- Increase rachis length, berry numbers & bunch weight
- Improved plant defence system
- Improved flower retention and fruit set

Results

Stress Tolerance

Plants better able to withstand environmental stress (drought, frost, heat)

Plant Vigor

Greener plants & better developed canopy

Yield Increase

Increased production, sizing and quality and delayed senescence

Ease of Use

Compatible with fertilisers (particularly calcium nitrate, potassium nitrate), fungicides, insecticides, acidic GA

Can be applied with copper and fungicide sprays

Liquid filtered to 90 microns to ensure it can be used as a foliar spray (or via irrigation) and acidified to a pH of 4-4.5 (for stability).



Treated bunches (Pinot Noir) visibly longer and have more grapes.
Cluster weight increased by 29%, berry number by 20%

Harness the power of nature

Why Super Kelp works

Improved crop performance

In kelp, macro- and micro- elemental nutrients, amino acids, vitamins, cytokinins, auxins, betaines, alginates, sterols and abscisic acid affect cellular metabolism in plants that lead to enhanced growth and yield. They are bioactive at low concentrations. -Khan 2009; Blunden 1997

Heat Tolerance

Kelp can be used to provide protection during heat stress with effects lasting for 2-3 weeks. Betaines in Kelp increase chlorophyll content and consequently photosynthesis, cytokinins induce heat tolerance, increase potassium uptake and improve root growth, while antioxidants in Kelp help plants in temperature extremes. -Khan, 2009; Ervin 2004

Frost Tolerance

Offers an extra degree or two tolerance to frost, although some information suggests as high as 3-4°C. Lowers temperature at which cells will freeze. This is because it is a highly effective brix builder. Plants with higher sugar content have a lower freezing point. -Wilson 2001

Improved flower and berry set

Kelp enhances the mobilization of cytokinins from the roots to the developing fruit. This increase in cytokinin availability will eventually result in greater supply of cytokinins to the maturing fruit. -Khan 2009

Enhanced plant defence against pest and diseases

- Kelp imparts nematode resistance possibly by altering the auxin:cytokinin ratio in the plant - Khan 2009
- Kelp contains elicitors (eg polysaccharides) which plants use to protect themselves against pathogen invasion. - Khan 2009
- Alginates in Kelp promote growth of beneficial fungi which colonise roots and result in stronger plants - Kuwada 2006

How to use

Super Kelp can be applied every 4 - 6 weeks during the growing season as a foliar feed or soil drench, enabling the plant to receive direct benefits from the naturally balanced nutrients and growth promoting substances.

For heat and cold (frost) stress:

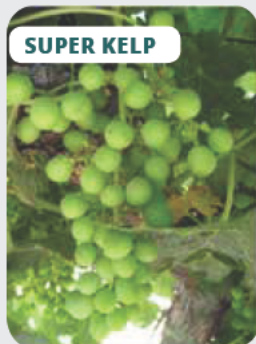
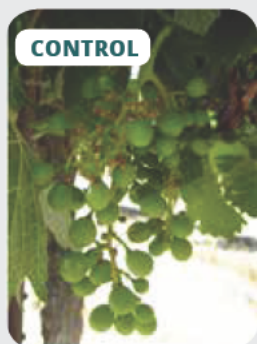
- Apply 36-48 hours prior to stress event as a foliar spray or via irrigation. During events it is recommended to apply via irrigation.
- Repeat every 14 days during extended heat and cold periods. For extra frost tolerance it can be mixed with 0.5% potassium fertiliser to help strengthen plants.

Drought Tolerance:

- Regular use during drought to stimulate root growth can help crops explore greater soil volume and access moisture.

A selection of results

Merlot



Merlot - treated bunch visibly longer with more berries.

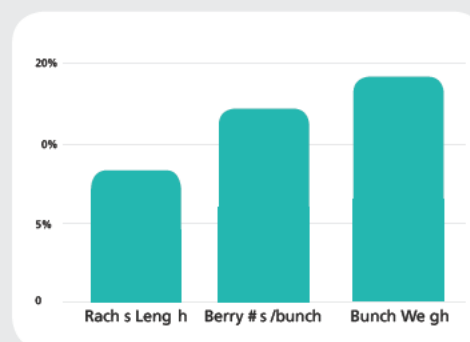
Average rachis length increased by 9%, berry number by 19% and cluster weight by 44%

Plant Vigour



Treated vines showed better developed canopy

Mixed varieties - 8 sites



Average increases compared to control

Rachis length increases allow for better air flow and spray penetration supporting better disease control.

Berry number increases indicated improved set and yield.

Bunch weight increases combined with rachis length and berry number indicate increase in set rather than berry size. These increases mean increased yield and revenue for grower.

Information & Advice

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