SUSTAINABLE FARMING SOLUTIONS

Berries

Super Kelp

Superior Growth
Stronger Plants
Mixes easily

Stress Tolerance - heat and frost

Activity

Increased root growth

Increased bunch weight, fruit firmness, nutrients

Improved tolerance to stress

Super Kelp increases berry weight and firmness producing higher quality berries.

Results

Stress Tolerance

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

Plant Vigour

Greener plants & better developed canopy

Yield Increase

Increased production, sizing and quality

Ease of Use

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

Can be applied with copper and fungicide sprays

Filtered to 90 microns ensures Super Kelp can be used as a foliar spray (or via irrigation) and acidified to a pH of 4-4.5 (for stability).

Harness the power of nature

Super Kelp

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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. Betains in Kelp increase chlorophyll content and consequently photosynthesis, cytokinins induce heat tolerance, increase potassium uptake and improve root growth , while anti-oxidants 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^{0}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 regularly 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:

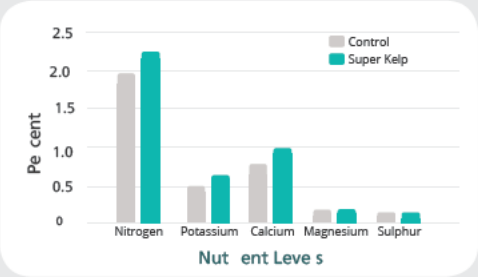
- *Apply 36-48 hours prior to stress event as a foliar spray or via irrigation. During events it is recommended to apply via irrigation.*
- *Repeat every 14 days during extended heat and cold periods. For extra frost tolerance it can be mixed with 0.5% potassium fertiliser to help strengthen plants.*

Drought Tolerance:

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

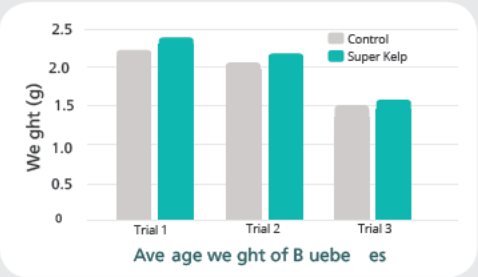
A selection of results - Super Kelp

Blueberries - higher nutrients



Higher nutrient levels compared to control.
Trace Element, Zn, B, Fe and Mn also higher than control.
Applications pre-bloom; post-bloom; 2 weeks later.

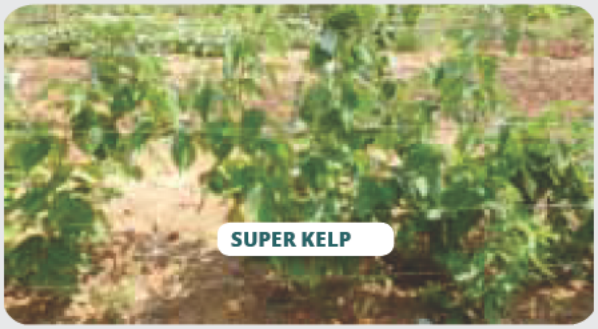
Blueberries weight increase



Super Kelp consistently increased average weight of blueberries over 3 sites.

The increase in weight ranged from 3-8%. Increased berry weight improves yield and grower return.

Raspberries - improved establishment after heat



Treated plants 8 weeks after transplant showed increased plant growth - taller and more branches than control. Plants were under stress for a week with temperatures over 38^{0}C.