

# ENHANCE KCS

*NPKS 2-0-5-4 + 7% Calcium, 11% Silica*



Concentrated silica, calcium & potassium suspension to increase plant tolerance to salinity, enhance disease & pest resistance, improves shelf life & quality of fruit & vegetables

## BENEFITS OF ENHANCE KCS

- Highly micronised, controlled released, low salt index, Potassium, Calcium and Silica. Suitable for all crops.
- Optimises plant response to salinity & high sodium chloride in soils.
- Aids in stress mitigation.
- Reduces plant water demand in dry soils whilst increasing yield.
- Enhance shelf life & quality of fruit & grain through stronger cell structures & enhanced disease resistance.
- Reduces the incidences of blossom end rot and bitter pit.
- It improves the soil health by binding the free aluminium within the soil and reducing the impact in water stress.
- When applied as foliar it mitigates heat stress and improves water use efficiencies.

## THE IMPORTANCE OF SILICA

Like other elements, silicon plays a vital role in plant physiology. The range of silicon in plant tissue is approximately 0.1 to 10 %. Silicon enters plants and accumulates around the epidermis of roots and shoots. Silicon forms a gel and associates with calcium and pectins to stabilise cell walls, increasing a plant's ability to handle stress conditions. Silicon improves plant cell strength and structure, reducing lodging of cereals and sugar cane. Studies have shown Silica to alleviate the negative effects of numerous abiotic stresses, including salt, water heat, cold and heavy metals.

## THE IMPORTANCE OF CALCIUM

Calcium is required for the cellulose precursors for cell wall formation. It also stabilises cell membranes and protects them – an important attribute under stress conditions. In fruit crops it is required in high quantities and is important for fruit quality and shelf life. It is also known that when plants are threatened by infection, calcium binds to a protein called calmodulin that prompts plants to manufacture salicylic acid (SA), a close chemical relative of aspirin. SA acts as a signal molecule that kicks off a series of reactions that help defend against external threats (SAR response). Calcium also has a role to play in sodic and saline soils by displacing the sodium ions from the soil particles.

## THE IMPORTANCE OF POTASSIUM

Potassium regulates water, electrolytes and turgidity of plant cells. In conjunction with Silicon, the 2 elements work synergistically controlling water relations and reducing plant water demand and increasing tolerance to drought. Potassium is also vital for cell division, protein and carbohydrate formation, and thus fruit quality. Lack of potassium when the plant is young cannot be compensated for later.

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**CHARACTERISTICS:** pH: 8.5 – 10.5; Specific Gravity: 1.21 – 1.23

AUS Analysis W/W%: 1.8% N, 5% K, 4.1% S, 7% Ca, 11% SiO<sub>2</sub>.

International Analysis W/W%: 1.4% N, 4.9(K<sub>2</sub>O), 3.4% S, 5.8% Ca, 9.1% SiO<sub>2</sub>.

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## APPLICATION

**BROADACRE:** Such as Barley, Canola, Cotton, Grain legumes, Maize, Oats, Rice, Sorghum, Triticale, Wheat, Sugar Cane & Pasture crops. **Foliar: 2 – 3 L/ha** in a maximum practical final spray volume. **Fertigation: 3 – 5 L/ha.** Foliar: Apply in a minimum of 1:80L water. Apply every 14- 21 days from fifth visible leaf onwards. For best results apply first sprays before leaf hardening of crop. Apply to sugarcane at planting and during the leadup to hot, dry conditions. Silica reduces lodging and improves disease mitigation.

**DECIDUOUS TREE CROPS:** Such as Apple, Almond, Cherry, Nectarine, Peach, Pear, Pistachio and Walnut. **Foliar: 3 – 6 L/ha** in a minimum of 450 – 900L final spray volume. **Fertigation: 10 – 15 L/ha.** Apply at early spur burst, complete petal fall and post blossom as required. **DO NOT apply as foliar on high chill stone fruit varieties.** Dormancy spray only. Best applied through soil during growth period.

**EVERGREEN TREE CROPS:** Such as Avocado, Citrus, Macadamia, Lychee. **Foliar: 3 – 6 L/ha** in a minimum of 450 – 900L final spray volume. **Fertigation: 10 – 15 L/ha.** Fertigate every 3 – 4 weeks to enhance shelf life & quality of fruit. Foliar applications enhance pest & disease resistance, assists with stress mitigation and fruit quality.

**FRUITING VEGETABLES:** Such as Capsicum, Cucurbits, Eggplant, Tomatoes (field), Watermelons, Pumpkins. **Foliar: 5 – 6 L/ha** in a minimum of 750 – 900L final spray volume. **Fertigation: 10 – 15 L/ha.** Apply four applications, 14 -21 days apart through the crop cycle from early growth onwards.

**LEAFY VEGETABLES:** Such as Endive, Fennel Lettuce, Broccoli, Cabbage, Cauliflower, Kale and Herbs. **Foliar: 4 – 6 L/ha** in a minimum of 750 – 900L final spray volume. **Fertigation: 8 – 10 L/ha.** Apply four applications, 14 -21 days apart through the crop cycle from early growth onwards.

**ROOT VEGETABLES:** Such as Beetroot, Carrot, Leek, Onion, Potato, Radish, Sweet Potato. **Foliar: 4 – 6 L/ha** in a minimum of 750 – 900L final spray volume. **Fertigation: 6 – 10 L/ha.** Apply four applications, 14 -21 days apart through the crop cycle from early growth onwards. Regular treatments increase plants tolerance to toxicities, stress and enhance shelf life & quality .

**VINE and BERRY CROPS:** Such as Blueberry, Strawberry, Raspberry, Wine and Table Grapes. **Foliar: 5 – 6 L/ha** in a minimum of 750 – 900L final spray volume. **Fertigation: 10 – 15 L/ha.** Apply as required to strengthen skins, enhance fruit quality and disease and pest resistance. **DO NOT apply more than 4x per hectare rate or concentration.**

Fertigation rates are dependent on seasonal nutrient demand. Agitate contents well prior to application.

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NOTE: The suggested rates of application of the Product are designed for typical Australian conditions and should be used as a guide only. Each farmer's climatic conditions, water quality, soil types, application processes and practices may differ and therefore necessitate corrections to ensure optimum results. Good agricultural practice requires that application be avoided under extreme weather conditions such as temperatures over 28°C, high humidity, frost, rain etc. It is recommended that when applying to a crop or area for the first time, or in combination with other chemicals, a small test area should be sprayed and observed prior to the total spray. Where possible, it is recommended that regular leaf tests are conducted to determine actual plant nutrient availability during each growth cycle. Soil tests at least once per year are essential.