

# Want strong and heavy plants?

SilikaMajic provides a highly economical way of maintaining optimum silica levels in your plants. Each litre of SilikaMajic treats 5000 litres of nutrient. There is simply no excuse for denying your plants of added strength and weight.

## Why is silica so important for my plants?

Various research projects conducted over the past 40 years have shown that the presence of silica ( $\text{SiO}_2$ ) in plant tissue produces many beneficial side effects:

- **Increased stem strength and rigidity** - once silica is taken up by the roots, it is deposited in the plant's cell walls as a solid silica matrix equivalent to quartz. This structure produces stronger and more rigid cell walls and hence a 'mechanically' stronger plant. This enables better leaf orientation for receiving light which in turn enhances photosynthesis and growth rates.
- **Increased fruit weight**- accumulation of silica in plant cells can result in dry fruit weight being 10% higher.
- **Increased resistance to fungal diseases - particularly mildews.** When applied via the nutrient or as a foliar spray, silica accumulates around the points of fungal attack to physically resist fungal ingress.
- **Increased leaf strength**- improves wilting resistance.
- **Increased tolerance to high salinity**- silica has been shown to reduce problems arising from nutrient toxicity and/or imbalance. Depending upon the type of nuisance chemical, high silica levels have been shown to either reduce nuisance chemical uptake or aid in redistributing it more evenly within the plant. This reduces the damaging impact of such chemicals (e.g. sodium, chloride) on individual cells.

## Why are silica additives needed in hydroponics?

Natural waters commonly contain around 5ppm soluble silica therefore *soil* grown plants enjoy a feed of soluble silica each time the plant is watered. Further, because sand is composed largely of silica, the roots of soil grown plants are immersed in a potential silica reservoir. Thus for most soil grown plants silica is potentially available from both the feed water and the soil. However, in recycling hydroponic systems, once the plant consumes the silica present in the raw water no more silica is available and therefore extra silica must be added to the nutrient.

*Note*, silica cannot be included in concentrated nutrient formulations because *stable* silica solutions are by nature highly alkaline thus making them incompatible.

## SPECIFICATIONS

- **Commercial strength (20% silica)** - each litre treats 5000 litres of nutrient (0.2ml per litre produces 40ppm silica).

**Note:** Electron microscopy and x-ray analysis both confirm that once silica is deposited in a given cell it can no longer be moved to another cell. Consequently to benefit all new areas of the plant, silica must be used throughout the entire growing cycle.

- **Totally soluble silica** - all of the silica in SilikaMajic is in the *soluble/available* form which ensures uptake by plant roots. This is a significant feature because clay products (powders) typically contain *zero\** silica that can be absorbed by roots. [\*As determined by the internationally recognised molybdosilicate analytical method]
- **Highly stable - Indefinite shelf life.** Silica solutions are often very unstable. They decompose in the bottle (verified by the fact that they are 'milky'/turbid rather than clear liquids) and will not dissolve when placed in the nutrient solution. SILIKAMAJIC however is completely stable with an *indefinite* shelf-life.
- **Contains NO sodium or nuisance chemicals**
- Suitable for all media (coco-peat, NFT, Rockwool, expanded clay, perlite etc.) and all system types (recirculating and non-recirculating).
- Available in 250ml, 1L, 5L & 20L.



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LEADERS IN HYDROPONICS

