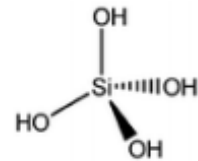


SilicaPower

Silicone fertilizer with 3% ortho silicic acid

SilicaPower is a product that stimulates the production of the plant it's own antidotes to fungi and enhances cell walls and epidermis. With 3% ortho silicic acid, this product has a high concentration that is easy to absorb by the plant. SilicaPower can be dosed via the A tank as well as by leaf spray.

SilicaPower contains ortho silicic acid (OSA). SilicaPower is a pure SiO_2 colloid solution of micro SiO_2 in vitalized water. These one million millimeter small silicon particles are surrounded by a shell of H_4SiO_4 (ortho silicic acid). This is the smallest possible form of silicon available. Unlike many other forms of silicon, this form is very absorbable for plants. After application, the silicon is incorporated into the plant where it accumulates in the epidermis and it is subsequently incorporated as part of the cell wall. This improves the natural resistance of the plant and makes fungi, such as real mildew, infest less easily to the plant.



In addition, ortho silicic acid is a raw material with a regulatory effect on the cellular stress under osmotic stress. As a direct consequence, plants dries out less quickly.

Positive effects of silicon:

- Enhances the plant own natural defenses and thereby the production of toxic substances to fungi.
- Stimulates higher chlorophyll production which results in higher light capture efficiency and there for more photosynthesis.
- Increases the osmotic stress in the cells.
- Increases redistribution of minerals in the plant.
- Increases the potassium uptake.
- Greater amount of the CO_2 binding enzyme Rubisco.
- Stimulates the growth of root hairs.
- Better leaf positioning.
- Reduces sodium uptake and reduces salt stress.
- Facilitates the production of an important enzyme that regulates carbon build-up in sugars.

With the following results (in the Netherlands):

- Saintpaulia: 35 - 80% less, mildew
- Cucumber: 5 - 10% increase in production
- Lettuce: less brown leaf edges - better distribution of Mn and Ca through the leaf



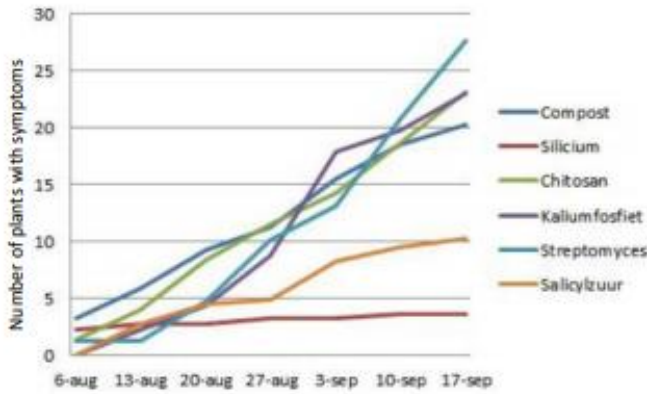
Application SilicaPower:

- Possible via the A tank and leaf spray:
 - 250 ml / ha / week via the A tank
 - 500 ml / ha / week via leaf spray
- SilicaPower is 25% to 50% cheaper than other liquid silicone fertilizers.

Research shows effect on Silicon as a fertilizer

Studies have shown that the use of silicon as fertilizer improves the quality of crops (e.g., fruit strength, stiffness). In addition, it can increase the efficiency and the promote resistance to biotic (fungi) and a-biotic stresses (drought, heat).

Research at Wageningen UR (the Netherlands), december 2014; Silicon against phytophthora in Kalanchoe.



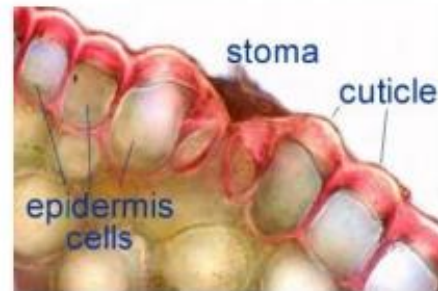
Clearly shows that the plants sprayed with SilicaPower (6 treatments) have the least plant with symptoms of phytophthora.



Further explanation on the operation of silicon

Silicon is stored in the epidermis as a microscopically thin silicon-cellulosic layer, which makes the cell wall stronger. Because of this protective layer, less moisture is evaporated. Also it makes the layer harder, which makes it more difficult for insects and fungi to penetrate.

Image: Cross section through a leaf of a living plant, where in the epidermis silicagel is polymerized with the protective wax layer (the cuticle - red colored).



Silicon protects against:

Biotic stress	Abiotic stress
Mechanical, Through the silicon layer in the cuticle: <ul style="list-style-type: none"> • less attack by insects • less penetration of fungi 	Physical stress by: <ul style="list-style-type: none"> • wind • drought • (UV) radiation • high & low temperatures
Chemical Facilitates the production of phenols, phytoalexins and other signal substances and enzymes that activate the immune system.	Chemical stress by: <ul style="list-style-type: none"> • high salinity levels • metal toxicity • nutrient imbalance