



CFT SILICA

NATURAL PEST RESISTANCE

A LIQUID FORM OF SILICA AND POTASSIUM

BACKGROUND

Silica is an often forgotten element that is not commonly administered in commercial agriculture. This is in spite of the proven benefits that it offers regarding pest and disease prevention and suppression.

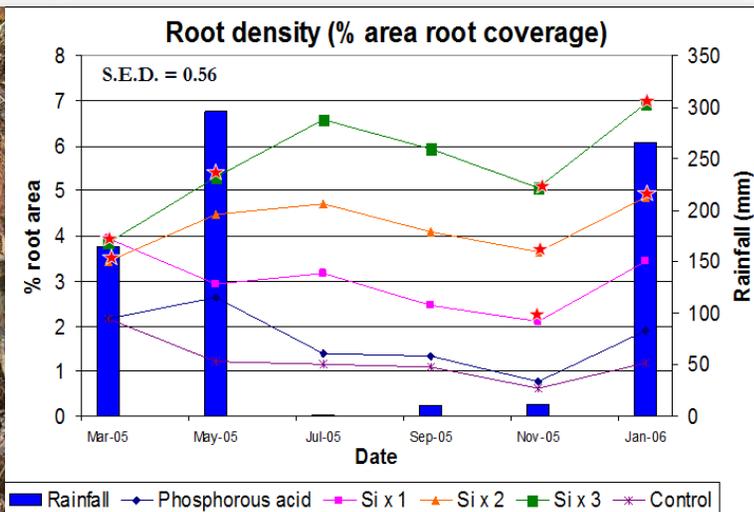
BENEFITS

- Improves photosynthesis and increases Brix in all plants.
- Reduces the negative effect of excess Aluminum, Sodium and Manganese.
- Beneficial impact on plant growth, yield and quality.
- Promotes the reproductive capacity of a plant by promoting pollination and the fertility of pollen.
- Causes a type armor layer in the cell walls, which is the main protection mechanism for the plant against fungus and insect pressure.

RESEARCH

Despite the extensive research on Silica it seems that it has achieved limited use in agriculture. The use of Silica has wonderful benefits in store as far as plant health and productivity is concerned, specifically in the control of fungi. Silica will strengthen cell membranes to such an extent that it is impossible for fungi to penetrate the cell.

A study on root health with the application of Silica has yielded the following results:





The application of Silica is also able to effectively control powdery mildew:

Table 1. Effect of Si and K₂HPO₄ sprays on powdery mildew colony development on grape leaves.

Days after inoculation	Spray	Concn (mM)	Colonies ^z	SE
13	Water		10 a ^y	2.2
	Si	17	3 b	0.9
	K ₂ HPO ₄	3.7	11 a	3.0
	K ₂ HPO ₄	11.0	11 a	0.9
16	Water		15 a	3.3
	Si	17	6 b	0.8
	K ₂ HPO ₄	3.7	17 a	3.1
	K ₂ HPO ₄	11.0	17 a	2.8
19	Water		18 a	4.1
	Si	17	6 b	0.9
	K ₂ HPO ₄	3.7	21 a	4.4
	K ₂ HPO ₄	11.0	20 a	2.0

^zMean number of colonies per leaf from four plants, two leaves per plant.

^yMean separation within each day by Duncan's multiple range test, *P* = 0.05.

APPLICATION

Foliar Sprays:

- **Vegetables:**
300 ml per 100 L water up to 2 L/ha equivalent – Apply every two weeks or as required
- **Boomgewasse**
300 ml per 100 L water up to 3 L/ha equivalent - Apply every four weeks or as required
- **Ornamental plants and lawns**
300 ml per 100 L water up to 2 L/ha equivalent - Apply every four weeks or as required
- **Focus Sprays (Spot applications)**
25 ml per 10 L water

MIXABILITY

CFT Silica can be mixed with a variety of fungicides and insecticides (Such as Brilliant, Metamidiphos, Suprathion, Bravo and Dursban) as well as a number of elemental foliar sprays. If unsure a flask test is advised. Always start with the water add the Silica then neutralize the pH



with Citric Acid. Add the product in question last. If it is incompatible the product will react with the Silica to form gel like globules or a milky / cloudy mix.
Silica is incompatible with Copper Zinc and Roundup

IMPORTANT CONSIDERATIONS

Do not apply Silica during flower formation, and be sure to buffer it with Citric Acid to lower the mix pH to around 6.

The product is generally not compatible with low pH inputs because of its high pH.

Do not exceed the prescribed dosages as it could damage the plant tissue especially if it is not buffered.

Because Silica is not readily trans-located in the plant it should be administered regularly for maximum effect.

TYPICAL ANALISYS: Weight / Volume

K20 11% en SiO₂ 24%

SG 1.33

pH 11.3 – 12.3

APPLICATION INSTRUCTIONS

SHAKE WELL BEFORE USE. If large quantities of water is desirable for a good coverage spray, care should be taken to not exceed the maximum dose per hectare. Where it is suspected that leaves may be sensitive or tender a test application should be made first to eliminate any potential risks.

The use safety equipment is advised during application as sprays might detrimental to lung function.

The product is not compatible with low pH inputs and no guarantees regarding compatibility can be made. We suggest that a jar test is done before it is combined with other products and that a test application is done before it is applied extensively.

STORAGE AND HANDLING

Store in a cool dry area away from direct sunlight. The product may crystalize below 5oC. If a product spillage is allowed to dry it will form an **EXCEEDINGLY SLIPPERY** surface. If the product dries out completely it will form glass-like crystals that can cut if it is handled. **DO NOT** store a diluted solution and maintain the seal integrity at all times (especially after use).