



K-Silica

A unique Silica-based fertilizer that prevents cereal lodging, increases disease resistance and reduces crop stress

Content Analysis:

Elements:	W/W %
Silica (SiO ₂)	27.1 %
Potassium (K ₂ O)	28.1 %
Humic Acid	1.8 %
SG: 1.44	

K-Silica benefits in plants:

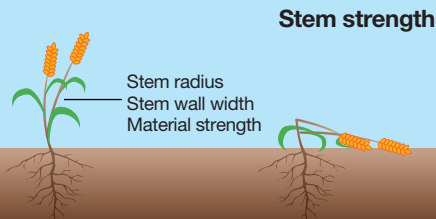
- Direct stimulation of plant growth and yield through more upright growth and plant rigidity
- Suppression of plant diseases caused by bacteria and fungi
- Improved insect resistance
- Alleviating various environmental stresses (including lodging, drought, temperature extremes, freezing, UV irradiation)
- Resisting chemical stresses (including salt, heavy metals, and nutrient imbalances)
- Silica improves photosynthetic rate and modulates the leaf structure
- Silicon is an important element for animals where it strengthens bones and connective tissue

Role of Silica in Plants

- The beneficial effects of Silica are mainly associated with its high deposition in plant tissues, enhancing their strength and rigidity.
- One major contribution of Silica is the reinforcement of cell-walls by deposition of solid silica.
- Silica is translocated from the roots as silicic acid [Si(OH)₄] through the xylem until it deposits under the cuticle and in intercellular spaces

A cereal stem is like a tube.

Stem strength depends upon stem diameter, wall thickness and material strength.



"It has been reported that adding silicon to monocots, especially Gramineae plants (Cereals), not only promotes growth and development but also promotes photo- synthesis, reduces pest infection, maintains the shoot in an erect position, and alleviates salt stress" (Ahmad et al., 1992; Epstein, 1999; Korndorfer and Lepsch, 2001; Ma, 2004).

Directions for Use:

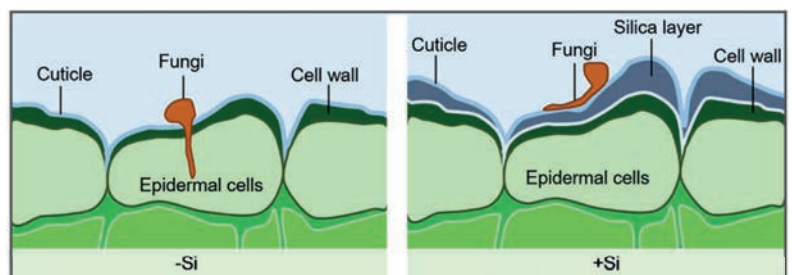
Agitate contents well before dilution.

- Fill the tank to minimum of half volume
- Add compatible chemicals as required while maintaining agitation
- Stir and/or agitate well
- Add **Buffer 5** or **RO 208** as required per labelled instructions
- Add fertilisers and compatible trace elements as required

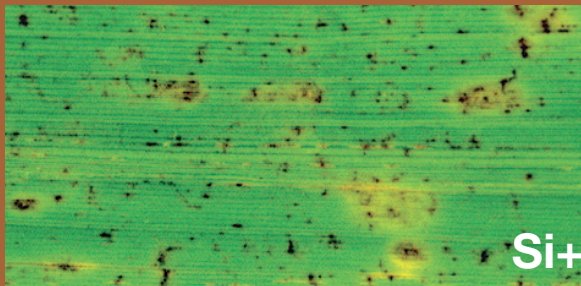
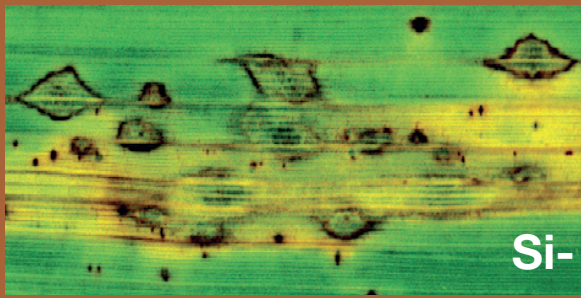
Application Rates:

Crops	Rates	Min. Dilution	Comments
Wheat, Barley & Maize	3-5 Lt / Ha	Maximum practicable	K-Silica reduces droopy growth and lodging. Apply when leaf area is sufficient to intercept foliar spray
Soybeans	2-3 Lt / Ha	1:300	Apply at 2-leaf stage.
Cotton	2-3 Lt / Ha	1:300	Apply via water injection or furrow spray at planting
Potatoes	2-3 Lt / Ha	1:300	Apply 1 week after planting Repeat at 7-10 day intervals
Seedling Production (Punnet or Tray)	1-2 Lt / Ha	1:300	Apply at seeding - repeat at 2 leaf stage and again 1-2 days prior to sale or transplant
Sugarcane	2-3 Lt / Ha	1:300	Apply 1 week after planting Repeat at 7-10 day intervals
Tomatoes, Peppers	2-3 Lt / Ha	1:300	Apply at transplanting - trickle or foliar. Mature plants: apply regularly to new growth.
Vegetables - Foliar - Fertigation	2-3 Lt / Ha 5-7 Lt / Ha	1:300	Apply at emergency or transplant. Foliar application: repeat at 7-10 day intervals as required
Ornamentals	2-3 Lt / Ha	1:300	Apply at emergence or transplant. Drench bulb at planting. Repeat 2 weeks after emergence. Continue if weak stem symptoms are evident.

K-Silica ensures cell strengthening, leading to stronger and wider wheat stems!



K-Silica to fight disease and strengthen itself.



Top: Silica deficiency in a rice plant, hours after inoculation with *Magnaporthe grisea*.

Bottom: Inoculated plant, with balanced Silica nutrients, resisting the same disease.

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