STURDY STALK

POTASSIUM SILICATE SUPPLEMENT

Strengthen plant cell walls to support heavier harvests and crop resilience with our potassium silicate supplement.



EMERALD HARVEST®



BUILD INNER STRENGTH

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STURDY STALK

What is Sturdy Stalk?

Sturdy Stalk is a potassium silicate supplement. It strengthens plant cell walls so they can support heavy harvests and better withstand external stressors such as wind and rain.

How does potassium silicate work?

The active ingredients in Sturdy Stalk, silica and potassium, are provided in the form of potassium silicate. Silica bulks up plant cell walls, so that plants can support as much fruiting and flowering as growers' skills and their favorite plant strains allow without damaging or running the risk of losing the crop.

Silicon is one of the most abundant elements in the universe. In outdoor gardens, if the soil is rich in minerals, plants get silicon naturally, while hydroponic gardens may require a supplement. The challenge for indoor gardens is not applying silica, necessarily, but rather, applying the right form of the nutrient silicon.

Silicon can be confusing?

Silicic acid is the only form of silicon that can be taken up by the roots and transported within plants; however it is very unstable. It's difficult to store in bottles for long periods of time, as it quickly falls out of solution. By combining silica with other elements—such as potassium, calcium or sodium—to produce silicates, nutrient producers create a stable fertilizer that time-releases silicic acid into the nutrient solution. In this form, it gets absorbed by the roots at relatively low concentrations, travels through the plant, and is eventually deposited in plant cells. Potassium silicate is formed by fusing high-purity quartz sand, which itself is almost pure silica, with potassium carbonate (K_2CO_3) at a high temperature.

Why purchase Sturdy Stalk over another brand?

Sturdy Stalk is specially formulated to work in tandem with King Kola and the other Emerald Harvest premium nutrients. When following our feeding chart, you can apply both Sturdy Stalk and King Kola and receive the benefits of both products without risk of overfeeding potassium.

In addition, Sturdy Stalk uses the most appropriate form of silicate (potassium silicate) to reduce waste and make sure the plants get the amounts that they need to bulk up their cell walls. The potassium silicate in Sturdy Stalk is the most soluble silicate possible.

What do the ingredients in Sturdy Stalk's unique formulation do?

Silica is abundant in nature and crucial for strong cash crops that produce weighty harvests.

- Silicon, together with calcium and lignin (found in woods and barks), hold plant cell walls together: Silicon is deposited in plant cell walls as silica, which means hardier tissues throughout the plant.
- Like the peel of a lemon, a thick, resilient cell wall translates into a tough outer skin for the plant, which keeps irritants – like pests – out and the good stuff—like moisture—in.

Potassium helps to regulate water and activates enzymes within the plant.

- Potassium, along with phosphorus, is one of the two consummate bloom-boosting elements. Without "vitamin K," plants don't have enough oomph to build big blossoms and heavy fruits.
- While the potassium levels in Sturdy Stalk are not enough for this support additive to be applied by growers as a standalone bloom booster, it still brings some benefits to the plant.
- When plants don't get enough potassium, water transport within plant cells becomes sluggish, leading to water stress (too much water pressure inside peripheral plant tissues such as leaves, fruits and flowers).
- Potassium also activates roughly 60 plant enzymes. Thus, the potassium level in the plant helps control the rate of chemical reactions necessary for plant growth.

Can I use Sturdy Stalk with my current nutrient line?

Sturdy Stalk can be used comfortably with other nutrient lines; however, it's best to note that when using in tandem with bloom boosters other than King Kola, you'll need to be careful not to overfeed potassium.

The statements made herein are based on secondary scientific research into the raw materials in our products. They do not necessarily constitute product claims approved by fertilizer regulators. This information is intended for internal use as educational material the Emerald Harvest team on the science behind our products, including possible benefits and features.