

FERRO

the fertile solution



SILEX

Silex is a unique silicon preparation based on orthosilicic acid. Orthosilicic acid is the only form of silicon that can be absorbed by plants.

A unique manufacturing process primarily involving sodium silicon and sulphuric acid results in the production of orthosilicic acid, the only form of silicon that can be absorbed by plants. The result is a wafer-thin coating of orthosilicic acid (H_4SiO_4) containing the tiniest possible particles of silicon measuring no more than between one and one hundred nanometres. Any remaining sodium is subsequently filtered out. This form of silicon is extremely stable.

Protection against abiotic factors

One of the most important properties of silicon is its ability to strengthen the cell wall. This makes the plant more resistant to heat and drought stress, the so-called abiotic influences. Other abiotic factors are wind and (UV) radiation. Heat and drought stress are among the most serious problems in plant cultivation.

Protection against biotic factors

Silicon is stored in the epidermis. The epidermis is the outer layer of cells of the leaf, the layer that is in contact with the outside air. The presence of silicon massively strengthens the cell wall.

As a result, less moisture is evaporated and the entire outer layer is hardened. This makes it more difficult for insects and moulds to penetrate the leaf and to damage the plant (and in particular the plant flower). In practice, the level of damage caused by mildew or bud rot (*botrytis cinera*) is much lower. Depending on the type of plant, the level of damage is reduced by at least 20 to 80%. These are almost unimaginable percentages and all can be attributed to a single element: silicon!

Highlighting the benefits

- Actively contributes to integrating silicon in the cell walls of the plant, thereby massively strengthening the cell walls.
- Increases resistance to abiotic stress factors such as heat, drought and salt stress.
- Regulates perspiration (also known as evaporation) thereby increasing water efficiency. This improves the functioning of the plant in periods of heat and drought.
- Improves calcium transport. This results in a higher sugar content, improved storage life and heavier flowers. Calcium is responsible for much of the end weight of the harvest.

Explanatory notes to the functioning of Silicon

Silicon is stored in the epidermis in the form of a microscopically thin silicon cellulose layer, which strengthens the cell wall. Thanks to this protective layer, less moisture evaporates. The presence of silicon also hardens the layer, making it more difficult for insects and moulds to penetrate the plant.

Use Silex to ensure strong, healthy plants, higher production, better quality end products and healthy roots, able to absorb the maximum amount of nutrients. This product has a very high content of orthosilicic acid, the only form of silicon that can be absorbed by the plant!

Anatomy of a Leaf



Application

Use Silex as required throughout the growing period. During periods of heat stress, root establishment and flower setting. And during periods when moulds can be active, for example when the plant has set its flowers.

Silex is hard as stone and burning like fire!