ENGAGE
The Power of Nutrition

Sion

21% Silicon w/w

A unique silicon nutrient for foliar and root application to increase the strength, growth and health of crops.

Sion is a fertiliser containing a unique form of silicon which provides a proven source of available silicon to the plant

Unlike many silicon products it is safe on crops at recommended rates

It boosts the strength of cells and increases the speed at which growth can be created so optimises overall growth potential

Sion aids the balance of nutrient uptake by the plant by addressing the silicon requirement thereby reducing competition for uptake against other essential elements

Sion reinforces leaf cuticle and other epidermal tissues to protect from pathogenic and pest pressure

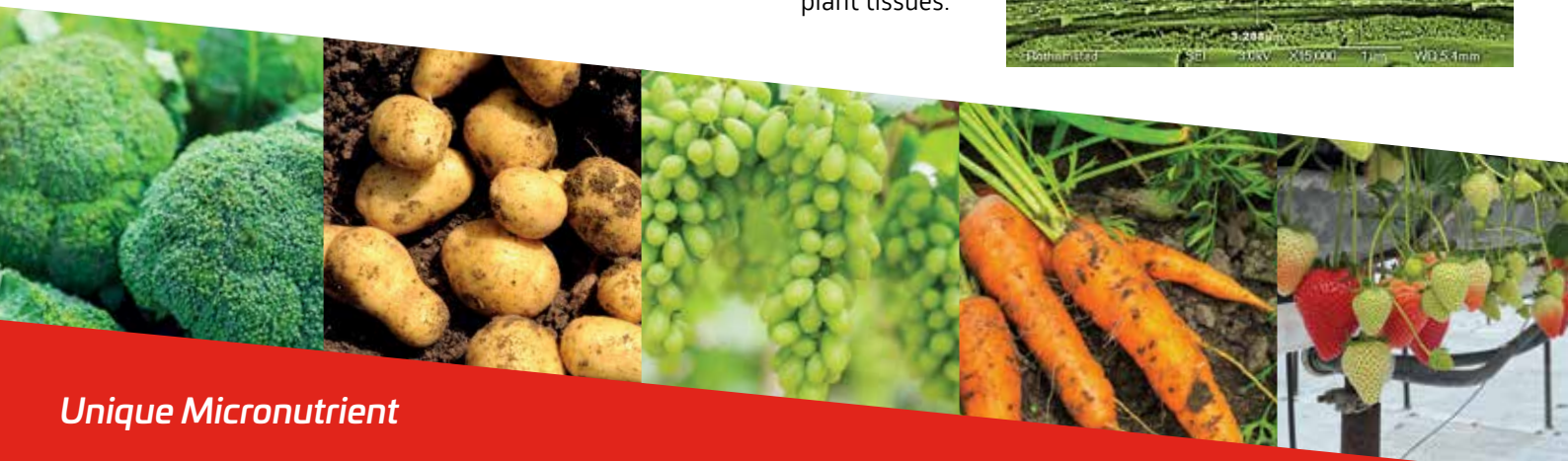
CROPS

- Brassicas
- Cereals
- Leafy Salads
- Potatoes
- Carrots/ Parsnips
- Legumes
- Fruiting Vegetables
- Top Fruit
- Stone Fruit
- Vines
- Citrus Fruit
- Soft Fruit
- Ornamentals

Benefits of Sion

- **Improved Plant Cell Development** – once a plant absorbs silicon, it is permanently deposited into cell walls within a matter of hours. The deposits form a silica-cellulose framework that is stronger and cells are created more quickly so the plant develops faster and can grow quicker when it has access to greater levels of silicon.
- **Balancing uptake of other elements** – the presence of silicon can positively affect the uptake and absorption of macro and micro nutrients. Silicon increases zinc, nitrogen and phosphorus uptake and when applying silicon there is a corresponding increase of nutrient flow into crops
- **Maintain Cell Integrity and Plant Strength** – one of the more obvious effects of adding silicon to crops is the visible response from the applications. Plants become stronger with thicker stems and branches. This in turn increases the yielding potential of crops as they can support more leaf, flower and fruit.
- **Protection against Biotic Stress** – in nature, plants have evolved to absorb and use silicon to become not just structurally but also biochemically strong. Plants use silicon to cope with a variety of adverse conditions they encounter — such as pest attacks, disease infection, strong winds, water shortages, toxic elements, etc. Think of plants using silicon to build a more solid house for itself against the huffs and puffs of adverse conditions.

After reaching leaves, silicic acid is deposited in the walls of epidermal cells, just beneath the cuticle. As water is lost through transpiration, silicic acid concentrates and polymerizes to a solid silica gel. This results in the formation of a double layer of cuticle. The solid silica gel bodies are called phytoliths or plant opals, as they give toughness to plant tissues.



Unique Micronutrient

Does Silicon in leaves acts as an armour for the plant?

Yes, to enter into a plant, fungal spores or insects have to puncture and penetrate the plant surface or cuticle first. When there is a silicon-reinforced cuticle there, the physical tissue resistance to the puncture increases and the progress of pest or disease entry decreases. The solidified silicon wears off mandibles of insect larva when they chew plant tissue, thereby limiting susceptibility to damage by insects.

Crop Timings and Application Rates

Crop	No of applications	Timings	Rate litres/ha
Cereals/OSR	2-4	As part of a regular programme at 10-14 day intervals or at first signs of increased biotic pressure	0.2-0.5
Brassicas	3-6	As part of a regular programme at 10-14 day intervals or at first signs of increased biotic pressure	0.3-0.5
Root Vegetables	2-4	As part of a regular programme at 10-14 day intervals or at first signs of increased biotic pressure	0.3-0.5
Potatoes	2-4	As part of a regular programme at 10-14 day intervals or at first signs of increased biotic pressure	0.3-0.5
Leafy Salads	2-3	As part of a regular programme at 10-14 day intervals or at first signs of increased biotic pressure	0.25-0.5
Top Fruit	3-6	After petal fall as part of a regular programme at 10-14 day intervals or at first signs of increased biotic pressure	0.25-0.5
Stone Fruit	2-4	After petal fall as part of a regular programme at 10-14 day intervals or at first signs of increased biotic pressure	0.25-0.5
Soft Fruit	3-6	As part of a regular programme at 10-14 day intervals or at first signs of increased biotic pressure	0.25-0.5
Vines	2-4	After florescence as part of a regular programme at 10-14 day intervals or at first signs of increased biotic pressure	0.25-0.5
Ornamentals	3-6	As part of a regular programme at 10-14 day intervals or at first signs of increased biotic pressure	0.3-0.5

Compatibility

Sion is compatible for use with other nutrients and pesticides. It is advised that if Sion is being used in multiple product mixes or with new active ingredients then a jar test is recommended.

For more information read the label before use.

*For more detailed application rates per crop, please visit **engagecropsolutions.com** or speak to an Engage advisor.*

Always read the label before use.

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