

Plant Available Silicon – How To Get It

Silicon-based fertilisers play a key role in plant nutrition, insect and disease resistance and soil absorption capacity and can optimise the physical and structural properties of the soil.

Silicon (Si) is an essential element for plant cell growth, function and health. AgriPower's superior quality Organic Silicon Fertiliser delivers amorphous silicon to the crop root zone in a highly plant-available form known as Plant Available Silicon or PAS. PAS increases the translocation of nutrients within the plant and increases water efficiency by reducing transpiration. The benefits are wide-ranging and highly significant.

Benefits at a Glance

- Amorphous silicon (Si) fertiliser / soil conditioner
- High in plant available silicon (PAS)
- Improves nutrient holding capacity
- Improves sugar levels
- Improves water efficiency
- Improves fertiliser efficiency
- Reduces nutrient leaching
- Reduces spoilage
- Increases nutrient uptake
- Increases carbon sequestration
- Increases pest/pathogen resistance
- Organic, non-toxic
- Odourless
- Won't burn plants
- Contains no cristobalite
- Uses existing infrastructure
- Environmentally friendly
- Animal friendly
- Reef safe

Plant & Soil Performance

- Increases crop production / crop yield per hectare
- Increases uptake and benefits of phosphorus by 45-88%
- Increases potash-fertiliser efficiency by 40-60%
- Reduces loss of nutrients and water and environmental damage
- Absorbs liquid fertilisers and reduces their breakdown
- Optimises biosolid utilisation
- Makes chemical fertilisers more efficient

Water & Nutrient Retention

- Absorbs up to 150% of its own weight in water then releasing slowly to plants as required
- Reduces water irrigation application rates 30-40%

Plant Growth & Immune System Boost

- Promotes more predictable and vigorous plant growth
- Improves cell wall structural rigidity, leaf erectness and plant architecture
- Results in higher survival rates with greater yields
- Improves cation exchange capacity and soil conductivity
- Makes plants less palatable to insects
- Enhances host resistance to plant diseases
- Improves plant ability to overcome stresses
- Greatly improves photosynthesis and chlorophyll production
- Reduces lodging in stems
- Increases mineral and nutrient uptake

Root Zones

- Balances air-filled porosity, high infiltration and high water-nutrient holding capacity
- Increases water and nutrient retention
- Restores soil structure and decreases soil erosion
- Reduces nitrogen draw down
- Increases weight and volume of roots by 20-200%
- Enhances drought and salt resistance in cultivated plants

Hydroponics

- Holds large quantities of water and nutrients while remaining free-draining and well aerated
- Does not agglomerate, so air permeates the root zone

Potting Mixes

- Keeps mix open and aerated whilst retaining moisture and nutrients at the root zone
- Adding 10% to mix increases mix volume by up to 30%

Sugar Levels

- Improves brix levels and flavour (30-70% in sugar cane)
- Increases plant flower and pollen production



Soil Salinity & Soil Toxicity

- Assists in prevention of secondary salinity and soil degradation
- Assists in negating aluminium, manganese and heavy metal toxicity
- Assists in protecting natural waters against heavy metals, nutrients and organic toxin
- Contains calcium and magnesium which reduces clay dispersion and rehabilitates salt-affected soils

Improved Bottom Line

- Lower outlay on chemicals and labour
- Lower spoilage losses
- Healthier crops
- Improved yields and quality
- AgriPower costs per tonne are comparatively inexpensive

Easy

- Simple to apply
- No new machinery/methodology required
- Delivery to crop via granule, powder or liquid form
- Can be customised to individual farmer requirements

100% Organic-farming Friendly & Safe

- Is natural, 100% organic
- Is safe to animals and humans
- Is non-toxic
- Is non-pollutant
- Is appealing to the 'organic consumer' market

Packaging

Granules

- AgriPower is supplied in bulk
- Packaged in 1 cubic metre bulk bags
- Bulk density = 0.8 (equiv to minimum 800kg net weight per cubic metre)

Powder, Fine Powder, Micro Powder

- Subject to customer order

Product Range

- Granules – from 2mm to 6mm
- Powder – less than 2mm, compatible for lime blending
- Fine powder – 500 micron, compatible for lime blending
- Micro powder – for foliar, fertigation and injection

Application

- Broadcast, side dress
- Incorporate with compost
- Blend with granular NPK, Mag or Lime
- Foliar, fertigation, injection

Application Rate

Granules

- 100KG / HA – standard annual application
- 200KG / HA – sandy soil or 1st application

Powder, Fine Powder, Micro Powder

- Subject to soil analysis – see Hortus Soil Analysis below

Chemical Analysis X.R.F. Summary

Silicon	Si	%	35.0
Calcium	Ca	%	3.0
Magnesium	Mg	%	1.9
Iron	Fe	%	2.6
Potassium	K	%	0.8
Zinc	Zn	ppm	39
Copper	Cu	ppm	27

Research undertaken on PAS has demonstrated that soils should contain more than 100ppm of PAS. This depends on soils, what is being grown, etc.

Industry Accreditations



Local Supplier

Sales & Orders

T: +61 2 9251 8884

F: +61 2 9241 7691 E: admin@agripower.com.au