

When using synthetic fertilizers in monoculture, the soil becomes increasingly dependent on the chemicals for its fertility, when overuse it can lead to long-term soil degradation. In contrast, organic fertilizers improve soil health over time by increasing soil organic matter, improving soil structure and water-holding capacity, and fostering the growth of beneficial microorganisms.



# Silicon Organic Fertilizer Production

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High-grade organic fertilizers do not contain harmful chemicals that can accumulate in the soil. Therefore, the use of organic fertilizers in monoculture is important for maintaining soil health and fertility, reducing environmental impact, and promoting sustainable agriculture.





## Organic Fertilizer Composting





## Microbes & Composting Monitoring

Additionally, silicon can help plants to better tolerate abiotic stresses such as drought, heat, and cold. This is because silicon helps to regulate the plant's water balance and reduce water loss through transpiration.

Overall, the addition of plant-available silicon to soil can have a positive impact on plant growth and health and improve the availability of other nutrients in the soil, such as phosphorus and potassium, by increasing soil pH and reducing leaching.





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## Calcium and Magnesium Silicate

An Eco-Friendly Fertilizer

Improve canopy photosynthesis

Increase stress resistance

Enhance resistance to biotic stress

**Disease** e.g. blast, powdery mildew

**Pest** e.g. stem borer, planthopper

Alleviate abiotic stress

**Chemical stress**

Alleviate metal toxicity  
e.g. Al, Cd, As, Mn, Fe

Improve nutrient imbalance  
e.g. N excess, P deficiency

Alleviate salt stress

**Physical stress**

Prevent lodging

Increase resistance to  
low and high temperature

Increase resistance to  
drought stress

Increase resistance to  
radiation stress



## Jumerah Silvicon Fertilizer

Silvicon Premium Organic 555

Silvicon Premium Organic Powder & Pellet

The total soluble solid of ripe durian fruit is within a range of 38.09% to 48.87% brix compared to watermelon fruit is 8% - 16% brix.

## What Level Of Brix Is Considered “High” In Plants?

Here’s a quick summary of what different Brix levels mean for plant health:

0 – 2 Brix	Very Low Brix	The plant is essentially unable to ‘look after itself’. Insects will move quickly to consume these plants and disease will run rampant.
3 – 7 Brix	Mid-level Brix	The plant has a chance of survival. Most agricultural plants fall within this range. They require pesticides and fertilizers in order to thrive.
8 – 11 Brix	Higher Brix	Natural resistance begins. Most sucking insects will not tolerate 8 Brix or higher; chewing insects that eat the roots or leaves directly will start to lose interest once the plant reaches a Brix level of 10 or 11.
12 – 20+ Brix	High Brix	Virtually no insects will attack a plant with a Brix level of 12 or 14+.

To increase brix level – Balance pH, silicon, organic fertilizer, fulvic acid, L-amino, calcium, magnesium and other macro nutrients



## Effect of silicon application.

Besides a structural role, **silicon helps to protect plants from insect attack, disease and environmental stress.** The application of silicon sources to fruit crops may pave way for increasing the yield and reducing the use of chemical fertilizers, pesticides and fungicides.

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Silicon strengthens plant cells which means reduced water loss, less environmental damage, **more root growth** and a decrease in lodging. Silicon increases plant resistance to fungal disease and pest attack because of harder epidermal cells.

## **Role of Silica in Durian Husk & Fruits**

Silica, also known as silicon dioxide (SiO<sub>2</sub>), is a natural mineral that is found in various forms in the earth's crust. In the case of durian husk, silica plays an important role in providing structural support and strength to the husk.

The durian fruit is surrounded by a spiky, hard outer husk that protects the soft, fleshy interior. This husk is made up of several layers of fibrous material, including cellulose and lignin, as well as silica. The silica in the durian husk helps to reinforce the structure of the fibers, making them stronger and more resistant to breaking or tearing.

Additionally, silica has water-absorbing properties, which can help to regulate moisture levels within the husk. This can be particularly important in areas with high humidity or during periods of rain, as excess moisture can cause the husk to soften and become more susceptible to damage.

In summary, the role of silica in the durian husk is to provide structural support and strength, as well as to help regulate moisture levels.

Silica helps to increase in fruit yield, as well as improvements in fruit size, colour, taste, and quality of durian fruit.

The amount of silica to apply per hectare of durian trees can vary depending on a variety of factors, such as the soil type, climate, and growth stage of the trees. However, in general, the recommended application rate of silica for durian trees ranges from 100kg to 200 kg per hectare per year.

**Silvicon™** Organic Fertilizer is formulated with sufficient plant available silicon, multiple probiotics, Trichoderma, amino acids and organic matter aiming on adjusting and improving the soil.

### Product Functions:

Improve soil fertility, and water retention by microbial activity.

Enhance plant growth to maintain stable productivity and yield.

Reduce soil toxicity and plant diseases.

Increase plant brix level in plants and prevent fruit decay.

Increase soil pH and uptake of phosphorus by plants.

Prevent oil palm Ganoderma diseases.

### Content:

Plant available silicon, microbes, amino acids, organic matter from decanter cake, cocoa shell, coffee dregs, mushroom powder, pineapple peel and bunch ash.



Formulated with SILVICON™ - Plant-Available Silicon, Calcium, Magnesium, N, P, K, Humic Acid, Trichoderma, Organic Matter & Trace Elements.

由SILVICON™ - 植物可用硅，钙，镁，氮，磷，钾，腐殖酸，木霉菌属，有机物和微量元素配制而成。

pH 7 - 9±

GUIDE TO APPLICATION RATES & METHODS / 应用和方法指南

Fertilizer 肥料	Crop 农作物	Mature Plants 大树	Young Plants 幼树	Nursery 苗圃
Silvicon™ 10% Silicon Premium Organic Powder	Durian 榴莲	10kg (Twice A Year)  10公斤 (每年兩次)	3kg (Twice A Year)  3公斤 (每年兩次)	250g (Once Every 2 Months)  250克 (两个月一次)
Silvicon™ 10% Silicon Premium N5 P5 K5 Organic Pellet		10kg (Twice A Year)  10公斤 (每年兩次)	1-2kg (Twice A Year)  1-2 公斤 (每年兩次)	125g (Once Every 2 Months)  125克 (两个月一次)

The above-recommended silicon organic dosages are to apply alternatively with your regular NPK applications.  
上述推荐的硅有机用量可与您的常规氮磷钾应用交替使用。