

# GROWSTONE 101:

## Everything You Need to Know About Growstones

Growstones are breakthrough, high-performance growing mediums that are made from 100% recycled glass and 100% American made.

### Aeration and Drainage

Growstones highly porous and uneven shaped aggregates provide a balanced combination of small pores inside each aggregate and large pore spaces between aggregates. This determines Growstones capacity to store water, air, and the ability to provide them to the plants.



What's truly unique about Growstones is the combination of pore size distribution and pore interconnectivity. Pore interconnectivity results in a large surface area available for roots to grow in and around. While larger pores between aggregates assure rapid drainage and air exchanges, which guarantees oxygen is rapidly dissolved in the water and supplied to the roots, small pores are filled with fresh air and covered by a film of oxygen-saturated water. As a result, after irrigation, each pore acts as a 'micro NFT system'.

The combination of small and large pore spaces creates an ideal environment for roots, microorganisms, and worms to thrive—full of oxygen-rich water, and nutrients.



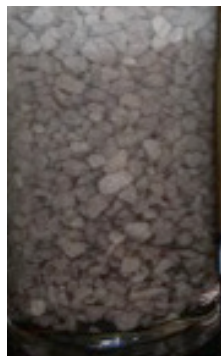
### Water retention

Growstones can hold up to 30% of its volume in water after irrigation.

Its pore size and interconnectivity also facilitates horizontal water diffusion leading to uniform moisture distribution, which in turn induces uniform root growth, allowing you to take advantage of the entire volume of growing medium.

### Capillary Action

Growstones pore size and connectivity results in good wicking ability. Growstones absorb and retain moisture four inches above the water level. This wicking ability has multiple advantages, all associated with creating a constant moist and highly aerated environment for roots above the water level. These conditions promote continuous development of hairy roots, which



considerably increase the absorption area of the root system. Growstones wicking ability also has practical implications on growing. With Growstones, in flood-drain tables, the water level need only to be raised up to two to three inches below the surface of the medium. The upper layer of Growstones will keep moist and filled with air. This eliminates the possibility of excess moisture at the surface of the medium, reducing chances for fungus gnat infestations and algae growth.

### Easy root zone control — High steerability

Growstones drier nature in comparison to other growing media has multiple advantages. It makes it easier to change root zone nutrients, pH and moisture levels as quickly as desired. As a result, with Growstones, it is easy to transition your plants from vegetative to bloom.

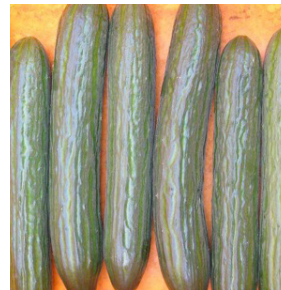


### Frequent feedings with no risk of root rot and fungal diseases.

Growstones drier nature also allows taking advantage of frequent feedings with no risk of overwatering or root rot, and it reduces the plant's susceptibility to Pythium and other fungal diseases.

### Silica release

Because Growstones are made from recycled glass, its surface leaches out silica in a form roots can uptake—monosilicic acid ( $H_4SiO_4$ ). Plants that accumulate silica have higher resistance to stresses such as drought, salinity heavy metals, and pathogens.



### Lightweight

Growstones are super lightweight with a bulk density of 0.20 g per cc.

### Versatile

Great fit for Hydroponics, Aerator in 'soil' blends, Bonsai blends, Aquaponics, Green Roofs, and more.

**Made from recycled glass. Made in USA.**

**Growstone®**  
[www.growstone.com](http://www.growstone.com)