materials for horticultural or greenhouse crop applications. They are soluble Si products that can be added to nutrient solutions or used as foliar sprays. However, plants respond better to Si acquired through the root system than from foliar applications.

Some sources of Si amendments are industrial by-products and should therefore be checked for the presence of undesirable contaminants.

Silicon Fertilization and Rates of Application

The need for Si fertilizer is not easily predicted by currently available soil tests. But soil testing for soil pH and the need for liming may be useful in estimating appropriate application rates of $CaSiO_3$.

A practical approach to managing soil fertility for enhanced Si nutrition of crops is to use $CaSiO_3$ products as a liming material. Application rates can be determined by the need for soil pH adjustment or lime requirement of the soil (often up to several tons per acre).

High-value horticultural crops may benefit for soluble Si fertilizers, such as Na_2SiO_3 or K_2SiO_3, applied through drip irrigation systems or from $CaSiO_3$ additions to soil-less mixes.

An adequate Si supply can benefit plants in a variety of ways, especially when in growing in stressful environments. BC

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Further Reading

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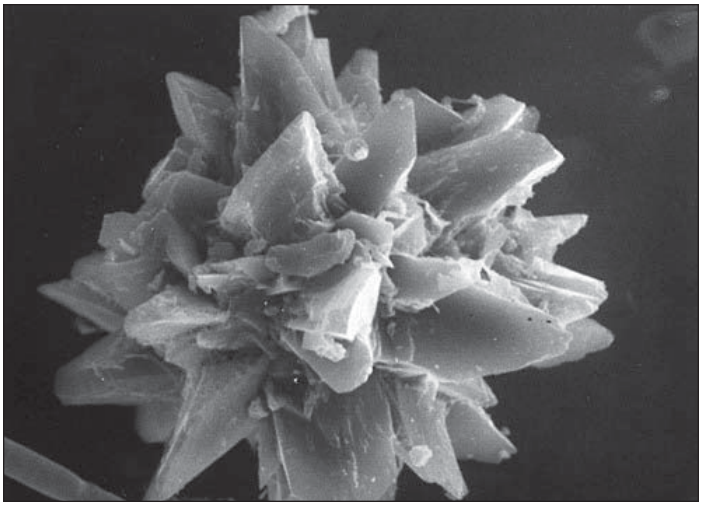

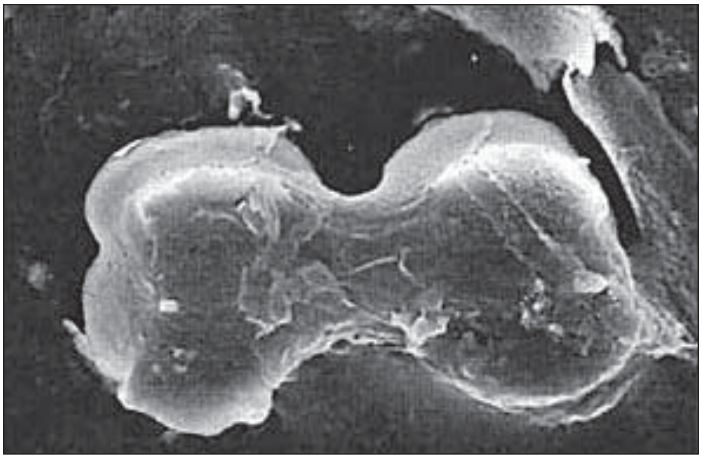

Images of Phytoliths or plant microfossils of (top) prickly pear (*Opuntia*) and (bottom) *Panicoid* (*warm season grass*) as viewed through a scanning electron microscope. http://www.texasbeyondhistory.net/varga/images/phytolith.html

Crop Nutrient Deficiency Photo Contest Entries Due December 12

December 12, 2013 (Thursday, 5 pm EDT) is the deadline for entries in the annual IPNI contest for photos showing nutrient deficiencies in crops. An individual can submit an entry for each of the four categories: nitrogen (N), phosphorus (P), potassium (K), and other nutrient deficiencies (i.e., secondary nutrients and micronutrients).

Preference is given to original photos with as much supporting/verification data as possible. Cash prizes are offered to First Place (US $150) and Second Place (US $75) in each of the four categories, plus a Grand Prize of US $200 will be awarded to the photo selected as best over all categories. Winners will be announced in January 2014… also look for details on the 2014 edition of this contest.

Entries can only be submitted electronically to the contest website: www.ipni.net/photocontest BC