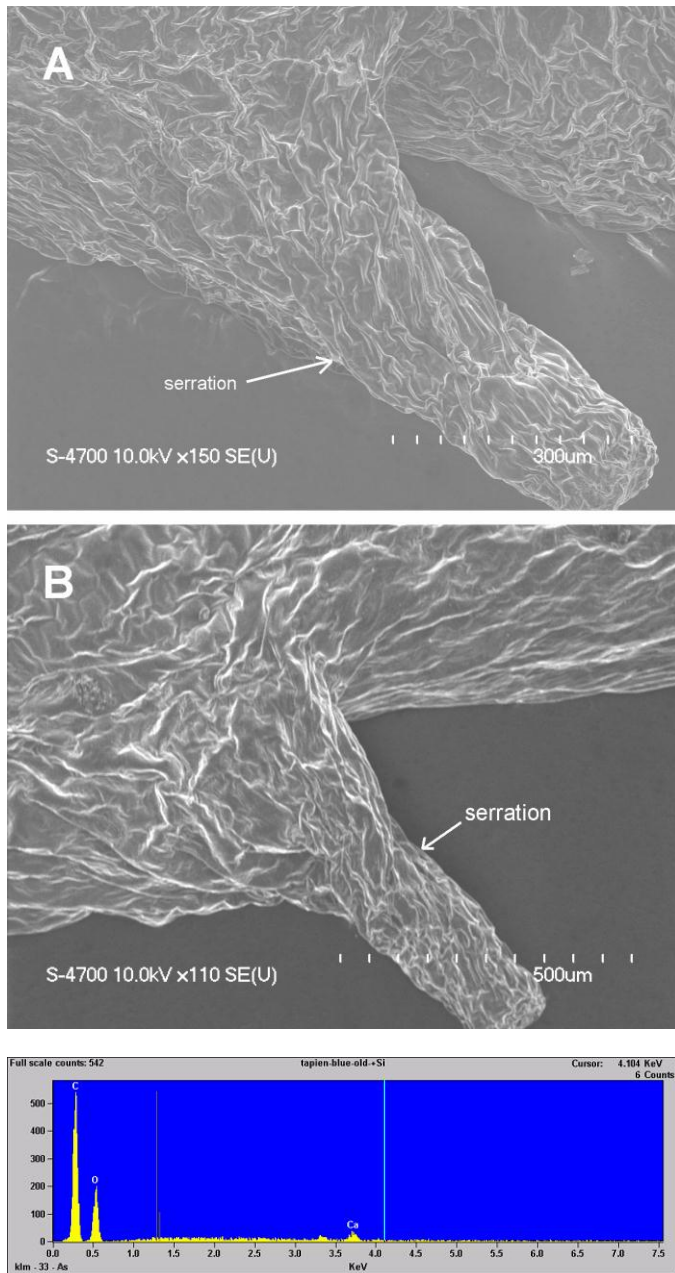


# Silicon is Deposited in Leaves of New Guinea Impatiens

Silicon (Si) is not considered to be an essential plant nutrient because most plants can be grown from seed to seed without its presence. However, many investigations have shown a positive growth effect if Si is present. The effect of Si on many ornamental and greenhouse crop species has not been extensively studied. Determining if silicon is taken up by different species in significant quantities is an important step in determining silicon's utility in the floriculture industry.

Figure 1. Leaf edge (serration) of New Guinea impatiens not exposed to silicon and corresponding spectrograph.



Frantz, J. M., D. D. S. Pitchay, J. C. Locke, L. E. Horst, and C. R. Krause. 2005. Silicon is deposited in leaves of New Guinea Impatiens. Online. Plant Health Progress. Doi:10.1094/PHP-2005-0217-01-RS.

In this investigation, we have shown silicon is deposited in the leaves of New Guinea impatiens. The results of this study show that there may be potential for using Si in greenhouse ornamental plant production that were previously believed to not have Si uptake and accumulation.

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**ARS** Agricultural Research Service

Figure 2. Leaf edge (serration) of New Guinea impatiens exposed to silicon and corresponding spectrograph. Note large, silicon scales or sacks deposited on the serrations and around a hydathode (labeled H in figure 2B).

