



## Role of Silicon in Plants

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### Message from the Guest Editor

The role of silicon (Si) in plant nutrition has been debated for many years. Silicon has yet not been decided to be an essential element to plants, mostly due to the problem of testing its essentiality. Since Si is very hard to completely remove from the nutrient substrate of plants it has been impossible to show that plants cannot complete its life cycle in their absence. However, plants benefit from the presence of Si and it is found that Si can increase biomass production and increase the tolerance to abiotic and biotic stresses and it helps the plant with stability and protection. Silicon is taken up in the form of silicic acid and Si transporters mediate the transport. Inside the plant amorphous  $\text{SiO}_2$  sk. phytolites, are formed. Those phytolites returns to the soil when plants are decomposed and by this Si returns to the soil and can be taken up by the next generation of plants. Some plants have high accumulation of Si in their body, e.g., rice, sugar cane, and bamboo, and, for these plants, Si is quite beneficial. All these findings point at the fact that Si has to be counted as an essential plant nutrient and not only beneficial.





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## Message from the Editor-in-Chief

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