Special Issue

Role of Silicon in Plants

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 SiO2 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.

Guest Editor

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Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

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