Special Issue

Practical Use of Si to Influence Plant Production

Message from the Guest Editor

The role of silicon (Si) in plant nutrition has been debated for many years. Nevertheless, plants benefit from the presence of Si and it is found that Si can increase biomass production and the tolerance to various abiotic and biotic stresses and it helps the plant with stability and protection. There are interesting data where Si increases the tolerance to both dry and salty environments and those contaminated with heavy metals. Si increases the tolerance to insects and pests and the use of Si fertilizers may decrease the use of pesticides and insecticides in the future. Use of Si fertilizers may improve the plant uptake of nutrient elements by increasing, e.g., the availability of phosphorus in the soil. Silicon may increase soil particle aggregation and by that improve soil quality. It is well known that silicon accumulator plants, such as rice, bamboo and sugar cane, increase their biomass production by Si-additives. However, this also applies to non-silicon accumulator plants. In agriculture, various Si-containing additives/fertilizers has been tested on their effects on plant production with various results.

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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