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Agricultural Economics and Management

COVER

Silicon is a beneficial element for the healthy growth and development of a wide range of plant species, especially under various forms of abiotic and biotic stress. All plants take up Si, but Si content ranges from *ca*. 0.1 to 10% (w/w), depending largely on plant species and external Si concentration. Rice is a typical Si-accumulator. If SiO_2 content in rice straw at mature stage is below 10%, Si deficiency symptoms such as willow-shaped leaf blades occur. Under Si deficiency, lodging and disease susceptibility increases in rice. *LSi1* (left) is a rice mutant defective in *LSi1* gene (Si influx) responsible for Si uptake and transport from solution to root cells. The Si content of the mutant is only about 10% that of its wide type (WT, right). The rice mutant is extremely low in biomass, fertility and yield with severe grain discoloration and disease infection as compared to its WT. Cover photos were provided by Prof. LIANG Yong-chao from College of Environmental and Resource Sciences, Zhejiang University, China. See pages 2138–2150 by Yan *et al*. for more details.