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Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Brief History and Introduction to Silicon Research -- Analysis of Silicon in Soil, Plant and Fertilizer -- Silicon Biogeochemistry and Bioavailability in Soil -- Silicon Uptake and Transport in Plants: Physiological and Molecular Aspects -- Silicon-mediated Tolerance to Metals Toxicity -- Silicon-mediated Tolerance to Salt Stress -- Silicon-mediated Tolerance to Drought and Freezing Stress -- Silicon-mediated Tolerance to Other Abiotic Stress -- Silicon and Plant-Pathogen Interactions -- Silicon and Insect pest resistance -- Effect of silicon on crop growth, yield and quality -- Silicon Sources for Agriculture -- Summary and Perspectives.
Sommario/riassunto	This book mainly presents the current state of knowledge on the use of Silicon (Si) in agriculture, including plants, soils and fertilizers. At the same time, it discusses the future interdisciplinary research that will be needed to further our knowledge and potential applications of Si in agriculture and in the environmental sciences in general. As the second

most abundant element both on the surface of the Earth’s crust and in soils, Si is an agronomically essential or quasi-essential element for improving the yield and quality of crops. Addressing the use of Si in agriculture in both theory and practice, the book is primarily intended for graduate students and researchers in various fields of the agricultural, biological, and environmental sciences, as well as for agronomic and fertilizer industry experts and advisors. Dr. Yongchao Liang is a full professor at the College of Environmental and Resource Sciences of the Zhejiang University, Hangzhou, China. Dr. Miroslav Nikolic is a research professor at the Institute for Multidisciplinary Research of the University of Belgrade, Serbia. Dr. Richard Bélanger is a full professor at the Department of Plant Pathology of the Laval University, Canada and holder of a Canada Research Chair in plant protection. Dr. Haijun Gong is a full professor at College of Horticulture, Northwest A&F University, China. Dr. Alin Song is an associate professor at Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences, Beijing, China. .