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	Plant Stress Responses
	Plant Physiology
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Nota di contenuto	Chapter 1. Predicting the outcome of Arsenic Toxicity on exposed juvenile male-humans: a shift to infertility -- Chapter 2. Arsenic and oxidative stress: an overview -- Chapter 3. Arsenic in seafood: current status, analysis and toxicity -- Chapter 4. Dietary Arsenic Exposure: Sources and Risks -- Chapter 5. Effects of arsenic: neurological and cellular perspective -- Chapter 6. Arsenic Toxicity: Source, Distribution and Bioremediation -- Chapter 7. Assessment of Arsenic contamination in groundwater and affected population of Bihar -- Chapter 8. Current scenario of groundwater arsenic contamination in West Bengal and its mitigation approach -- Chapter 9. Low Cost Nanoparticles for Remediation of Arsenic Contaminated Water and Soils -- Chapter 10. Biological Means of Arsenic Minimisation with Special Reference to Siderophore -- Chaper 11. Mechanisms of arsenic transport, accumulation and distribution in rice grains -- Chapter 12. The healing art of arsenic in various malignancies -- Chapter 13. Removal of arsenic from contaminated water using nanoadsorbents -- Chapter 14. Understanding the bioaccumulation and biosorption of arsenic [As(III)]

in plants and biotechnological approaches for its bioremediation -- Chapter 15. Genes and Biochemical Pathways involved in Microbial Transformation of Arsenic.

Sommario/riassunto	Arsenic (As) is a widely distributed element in the environment having no known useful physiological function in plants or animals. Historically, this metalloid has been known to be used widely as a poison. Effects of arsenic have come to light in the past few decades due to its increasing contamination in several parts of world, with the worst situation being in Bangladesh and West Bengal in India. This edited volume brings together diverse group of environmental science, sustainability and health researchers to address the challenges posed by global mass poisoning caused by arsenic water contamination. The book covers sources of arsenic contamination, and its impact on human health and on prospective remediation both by bioremediation and phytoremediation. Applications of advance techniques such as genetic engineering and nanotechnology are also discussed to resolve the issue of arsenic contamination in ground water and river basins. The book sheds light on this globalenvironmental issue, and proposes solutions to remove contamination through a multi-disciplinary lens and case studies from Bangladesh and India. The book may serve as a reference to environment and sustainability researchers, students and policy makers. It delivers an outline to graduate, undergraduate students and researchers, as well as academicians who are working on arsenic toxicity with respect to remediation and health issues.