



Plant Responses to Heavy Metals: From Deficiency to Excess

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Message from the Guest Editors

Dear Colleagues,

Some heavy metals, such as copper, manganese, nickel, and zinc, are essential for most plants but toxic when supplied in supraoptimal quantities, while the biological role for cadmium, mercury, and lead, with rare exceptions, is unknown and they are toxic even at fairly low concentrations in the environment. Both metal deficiency and metal excess can drastically affect different physiological processes in plants, leading to significant changes in plant growth and morphogenesis as well as plant productivity. This Special Issue is focused mainly on the mechanisms of metal effects, plant response to heavy metals, metal tolerance, and metal (hyper-)accumulation at the biochemical, physiological, molecular, genetic, and epigenetic levels.

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Guest Editors





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