



Improving the Tolerance of Crop Plants to Heavy Metal Stress

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Message from the Guest Editors

Some of the common heavy metals that can affect plants include cadmium, lead, mercury, chromium, vanadium, and arsenic. In plants, heavy metals can lead to the inhibition of plant growth, a decrease in photosynthetic capacity, a reduction in seed germination, negative alterations in plant metabolism, the induction of oxidative stress, alterations in membrane fluidity, the induction of lipid peroxidation, disruptions to ion transport, the inhibition of soluble enzymes and the inhibition of membrane-bound enzymes. Therefore, it is essential to monitor and manage the levels of heavy metals in soil and water to prevent their accumulation and reduce their impact on crop plant growth and development to improve food security and human health. The use of genetic engineering, microorganisms or biomolecules to improve plant defense systems under heavy metal stresses have become attractive ways to prevent heavy metal-induced damage. We welcome articles that focus on alleviating heavy metal stress by altering the crop plants' biochemistry and physiology to improve their tolerance to heavy metals.





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Message from the Editor-in-Chief

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