

Special Issue

Molecular, Metabolic and Physiological Responses to Boron Stress in Higher Plants

Message from the Guest Editors

Even though the first evidence of the essentiality of boron (B) for the normal development and growth of higher plants was described almost a century ago, the mechanisms underlying this essentiality has not yet been exhaustively clarified. B is a micronutrient that frequently shows a very narrow range of optimal concentrations; therefore, plants have evolved mechanisms to cope with deficiency and excess of B. Consistent evidence demonstrates that the maintenance of B homeostasis, which is mainly based on the active regulation of intracellular localization and the abundance of B transporters, is one of the most important mechanisms of B stress tolerance. The knowledge of the molecular, metabolic, and physiological changes induced by B deficiency or toxicity, as well as the characterization of the signaling pathways for these responses, has also advanced greatly in recent years. Findings in these fields can contribute not only to a better understanding of the role of B in plants, but also to provide efficient strategies to improve B stress tolerance in plants. The aim of this Special Issue is to collect findings related to these topics.

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Message from the Editor-in-Chief

Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

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