



Genetic Mechanism and Quality Detection of High Vigor Crop Seeds

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Message from the Guest Editors

Crop seeds are an essential input in agriculture; however, during their developmental stages, seeds can be negatively affected by disqualification, which can adversely affect seed vigor, seedling establishment, and crop production. Accordingly, seed vigor is one of several important qualified seed parameters, which are defined as "the sum total of those properties of the seed which determine the level of activity and performance of the seed or seed lot during germination and seedling emergence. High vigor crop seeds take a pivotal role in growing up sound seedlings, which was itself regulated by genetic mechanism and several environmental cues, such as plant regulators, temperature, light and moisture, etc. We are planning to focus on the recent progress of high vigor crop seeds including not only its genetic mechanism and morphological and physiological characteristics under varied genotypes or environmental stresses, but also emerging new technologies for high vigor detection, such as non-destructive spectrum screening of near-infrared spectral analysis and high spectral analysis, in addition to seed priming and pretreatment technologies for enhancing seed vigor.





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