Special Issue

Physiological Networks Determining Plant Production Under Stress: Results of Genotype–Environment Interactions

Message from the Guest Editors

The plant's production is a phenotypic trait that emerges from a complex network of morphophysiological traits at lower hierarchical levels. From this perspective, any variation in the genotype and/or environment may cause a variation in production. With this background in mind, the study of plant production must be based on a systemic view of the multiple traits that vary according to genotype-environment interactions, which can be called the environment. A physiological trait-based environment is urgently needed to help us understand how the genetic determinism of small-scale physiological mechanisms interacts in and with the environment, leading to plant production. This brings some questions: What are the main physiological traits upon which plant production relies? How do adverse environmental conditions impact those traits? How can management be applied to reduce the negative impact of stress on the key physiological traits plant production relies on? This special issue aims to explore such questions and expand our understanding of the physiological networks determining plant production and its reliance on genotype-environment interactions.

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