

Special Issue

Resistance and Tolerance Mechanisms to Crop Diseases and Their Effect on Grain Yield, Nitrogen Dynamics and Quality Traits

Message from the Guest Editors

Disease tolerance and resistance are two interconnected but distinct defense mechanisms that plants use to combat diseases caused by pathogens. Disease tolerance involves reducing the negative impacts of a pathogen on crop yield and quality. It is complex and may involve several factors operating at different levels to maintain yield performance in the presence of disease symptoms, while disease resistance entails the active prevention of pathogen colonization of the plant. Both mechanisms involve intricate genetic and molecular pathways that can be manipulated to improve plant health and productivity. In this Special Issue, we invite original research and reviews describing the current state of our understanding of disease tolerance and resistance. Studies reporting on different approaches including the epidemiology, ecophysiology, and genetic and molecular mechanisms involved in disease tolerance and resistance, as well as the potential applications of this knowledge in plant breeding and biotechnology to develop more resistant and tolerant crop varieties, are welcome.

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Deadline for manuscript submissions

closed (30 November 2023)



Agronomy

an Open Access Journal
by MDPI

Impact Factor 3.4
CiteScore 6.7



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