



Oat Resistance Breeding

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Message from the Guest Editors

Traditionally, oat has been primarily produced as a multipurpose crop for grain, pasture, and forage, or as a rotation crop in many parts of the world. However, in recent years the interest in oat's potential benefits in nutrition and health has increased significantly, due in part to its superior and unique combinations of biocompounds.

Oat crop is affected by many biotic and abiotic stresses that influence its growth and development, preventing it from reaching its full genetic potential and performance. In addition, the current climate change scenario is causing irregular and unusual yield instability and production losses. Plant responses to these biotic and abiotic stresses involve complex interactions among the genes, proteins, and metabolites that contribute to plant phenotype plasticity. A holistic interpretation of the mechanisms leading to the resistance/tolerance of oats to their biotic and abiotic constraints is necessary, as is going deeper into the molecular responses. This knowledge will help to develop next-generation oat breeding tools, including physiological, biochemical, genomic, and genetic approaches for a more sustainable oat crop.





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Message from the Editor-in-Chief

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