Special Issue

Better Oats: Unlocking the Potential of Genetic Diversity

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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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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