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Genetics, Genomics, and Biotechnology for Cereal Crop Improvements

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Deadline for manuscript submissions:

closed (31 January 2025)

Message from the Guest Editors

Dear Colleagues,

Cereal crops include both major staple food crops (etc. rice, maize, wheat and barley) and minor crops, such as sorghum, millet, pearl millet and teff, which are considered as important sources of dietary fibers, micronutrients and bioactive phyto-compounds. However, several factors have been threatening the global production of cereal crops.

To confront the challenges in crop improvement and to breed cereal crops with higher yield, better environmental adaptability and better quality, molecular genetics, genomics and mutli-omics and biotechnology approaches have been integrated in the up- and down-stream lines of molecular breeding of crops. The major biotechnological tools for cereal crop improvements include (but not limited to) map-based cloning, marker-assisted selection, genomic selection, QTL-mapping, GWAS, transgenic and gene editing technologies, as well as nano-agricultural biotechnologies. As such, we develop this Special Issue to provide a forum with which to address these problems and present new strategies and progress in the improvement of cereal crop species.



mdpi.com/si/176741

Special Issue



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Message from the Editor-in-Chief

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