

Special Issue

Molecular Breeding Approaches to Improve Agronomic Traits and Stress Resistance in Cereals

Message from the Guest Editors

Cereals are the most widely grown crops globally. Advancements in DNA sequencing, mapping techniques, map-based cloning strategies like SHOREmap and MutMap, and functional genomic strategies have played a significant role in deepening our understanding of cereal genetics.

This knowledge has been applied to improve yield under changing environmental conditions and in response to pressures from pests and pathogens. Selection for traits such as plant height, spike morphology, seed weight, and seed number, which directly influence yield, as well as resistance or tolerance to fungal, bacterial, and viral pathogens, nematodes, and abiotic stressors (including drought, salt, heat, cold, and heavy metals) has been prioritized.

This Special Issue of *Agriculture* focuses on showcasing recent advances in the fields of cereal genetics, genomics, and biotechnology, as well as examples of their application in crop improvement through breeding for agronomic traits and stress tolerance. Different article types, such as original research articles, opinions, and reviews, are welcome.

Guest Editors

Dr. Mingming Yang

College of Agronomy, Northwest A&F University, Xianyang, China

Dr. Sachin Rustgi

Department of Plant and Environmental Sciences, Clemson University,
2200 Pocket Road, Florence, SC 29506, USA

Deadline for manuscript submissions

30 November 2025



Agriculture

an Open Access Journal
by MDPI

Impact Factor 3.6
CiteScore 6.3



mdpi.com/si/220444

Agriculture
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
agriculture@mdpi.com

[mdpi.com/journal/
agriculture](https://mdpi.com/journal/agriculture)





Agriculture

an Open Access Journal
by MDPI

Impact Factor 3.6
CiteScore 6.3



[mdpi.com/journal/
agriculture](https://mdpi.com/journal/agriculture)



About the Journal

Message from the Editor-in-Chief

Agriculture (ISSN 2077-0472) is an international, cross-disciplinary and scholarly journal on the science and technology of crop and animal production, and management of the natural resource base for agricultural production. We invite submissions from authors according to the aims and scope of the journal described in more detail on this page. *Agriculture* is published in an open access format – articles are published on the journal's website immediately after acceptance, giving the scientific community and the public unlimited and free access to the content.

Editor-in-Chief

Prof. Dr. Les Copeland

Sydney Institute of Agriculture, School of Life and Environmental Sciences, The University of Sydney, Sydney, NSW 2006, Australia

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubAg, AGRIS, RePEc, and other databases.

Journal Rank:

JCR - Q1 (Agronomy) / CiteScore - Q1 (Plant Science)