

## 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

15 April 2025



## Agriculture

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.3  
CiteScore 4.9



[mdpi.com/si/220444](https://mdpi.com/si/220444)

*Agriculture*

MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[agriculture@mdpi.com](mailto:agriculture@mdpi.com)

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





# Agriculture

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.3  
CiteScore 4.9



[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, crossdisciplinary and scholarly open access journal on the science and technology of crop and animal production, and management of the natural resource base for agricultural production. *Agriculture* is published in an open access format – research articles, reviews and other contents are released on the internet immediately after acceptance. The scientific community and the public have unlimited and free access to the content as soon as it is published.

---

### 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)