

## Special Issue

# Breeding Cereals for Improved Agronomic and Quality Traits under Adverse Environmental Conditions

### Message from the Guest Editors

Cereals are an important component of daily diets worldwide and play a key role in ensuring food security. To ensure food security, food production must increase by at least 60 percent to meet the needs of future populations. Significant variation among genotypes and environments has been reported for different agronomic and quality traits of cereal crops, and their interaction has often been shown to contribute to a great proportion of overall trait variation. High variation in environmental conditions across locations and years, significantly influenced by increasing incidence of various biotic and abiotic stresses, usually increases the G × E component of variation and consequently decreases the heritability of a trait and its response to selection. Therefore, breeding efforts for increased stress tolerance can contribute significantly to the overall stability of grain yield and quality in cereal varieties. This Special Issue (SI) aims to collect reliable information and experiences from around the world on genetic and breeding aspects of tolerance of cereal crops to biotic and abiotic stresses. The SI is open to research articles, opinions, reviews, and perspectives.

### Guest Editors

Dr. Valentina Španić

Department of Small Cereal Crops Breeding and Genetics, Agricultural Institute Osijek, Juzno predgradje 17, Osijek 31000, Croatia

Prof. Dr. Hrvoje Šarčević

1. Department of Plant Breeding, Genetics and Biometrics, University of Zagreb Faculty of Agriculture, Zagreb, Croatia  
2. Center of Excellence for Biodiversity and Molecular Plant Breeding, Zagreb, Croatia

### Deadline for manuscript submissions

closed (31 January 2025)



## Agriculture

an Open Access Journal  
by MDPI

Impact Factor 3.3  
CiteScore 4.9



[mdpi.com/si/184717](https://mdpi.com/si/184717)

*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)