Special Issue

Identification of Resistance of Maize Germplasm Resources to Disease

Message from the Guest Editors

Maize (Zea mays L.) is an important crop. However, maize yield and quality are seriously threatened by numerous diseases caused by diverse pathogens. The major maize diseases include northern corn leaf blight, southern corn leaf blight, southern corn rust, etc. These diseases, which can occur year-round or intermittently in different ecological zones, often lead to substantial economic losses. Developing maize cultivars with broad resistance to multiple diseases through breeding is the most effective approach for combating diseases. The identification of resistant maize germplasm and the discovery of resistance genes are major steps toward this goal. This Special Issue mainly focuses on, but is not limited to: the characterization of maize germplasm for disease resistance via the application of phenomics, genomics, or molecular markers; the development and utilization of novel molecular markers for resistance breeding; or comparative studies on different molecular marker systems associated with maize diseases resistance to assess the genetic structure of maize germplasm or populations; Maize–pathogen interactions and resistance gene mining and cloning.

Guest Editors

Dr. Canxing Duan
Institute of Crop Sciences, Chinese Academy of Agricultural Sciences/National Key Facility for Crop Gene Resources and Genetic Improvement, Beijing 100081, China

Dr. Yanyong Cao
Institute of Cereal Crops, Henan Academy of Agricultural Sciences, Zhengzhou 450002, China

Deadline for manuscript submissions

30 November 2025

Plants

an Open Access Journal
by MDPI

Impact Factor 4.1
CiteScore 7.6
Indexed in PubMed

About the Journal

Message from the Editor-in-Chief

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.

Editor-in-Chief

Prof. Dr. Dilantha Fernando
Department of Plant Science, University of Manitoba, Winnipeg, MB
R3T 2N2, Canada

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), PubMed, PMC, PubAg, AGRIS, CAPlus / SciFinder, and other databases.

Journal Rank:
JCR - Q1 (Plant Sciences) / CiteScore - Q1 (Ecology, Evolution, Behavior and Systematics)