

Special Issue

Precision Genome Editing in Crops: The Pathway from Discovery to Application

Message from the Guest Editors

Precision genome editing is transforming crop science, shifting from descriptive genomics to predictive and programmable genetic engineering. As plant genome complexity becomes clearer, integrated approaches—combining de novo sequencing, pangenomics, functional genomics, and AI-assisted target discovery—are essential for identifying genetic variation and designing precise editing strategies. Next-generation tools such as base and prime editing enable nucleotide changes without double-strand breaks, reducing off-target effects and improving genome stability. Advances in delivery and transformation efficiency support the development of resilient and high-performing crops. This Special Issue covers the precision genome editing pipeline and welcomes original research articles, reviews, policy analyses, and opinion papers across eight sections: sequencing and de novo genome assembly; pangenomics and genome diversity; target selection and functional genomics; editing methodology selection and comparison; delivery systems and regeneration; pitfalls, risk mitigation, and biosafety; regulatory landscape and policy perspectives; future directions in precision genome editing.

Guest Editors

Dr. Reginald Gaudino
Anthony Torres
Dr. Jason Argyris

Deadline for manuscript submissions

15 December 2026



Crops

an Open Access Journal
by MDPI

Impact Factor 1.9
CiteScore 2.4



mdpi.com/si/279047

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

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





Crops

an Open Access Journal
by MDPI

Impact Factor 1.9
CiteScore 2.4



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



About the Journal

Message from the Editor-in-Chief

Crops (ISSN 2673-7655) is an international, peer-reviewed, open access journal. It publishes original articles, critical reviews, and short communications in every aspect of crop science. The journal invites contributions concerning production, improvement and utilization of all plants that are grown as crops including grains, oilseeds, forages, vegetables, fruits, nuts, and those grown for industrial uses. Our aim is to publish timely experimental and theoretical research results in a rapid and readily accessible manner. Every published article is made immediately available worldwide with free and unlimited access to everyone. If you want your work to reach a global audience of crop scientists, we invite you to submit a paper to *Crops*, the international journal of crop science.

Editor-in-Chief

Prof. Dr. Yinglong Chen
School of Agriculture and Environment, The University of Western
Australia, Perth, WA 6009, Australia

Author Benefits

Open Access:

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

Journal Rank:

JCR - Q2 (Agronomy) / CiteScore - Q2 (Agronomy and Crop Science)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 22.4 days after submission; acceptance to publication is undertaken in 4.2 days (median values for papers published in this journal in the second half of 2025).