

Special Issue

Navigating the Future of Agriculture: Balancing the Benefits and Challenges of Alternative Plant Nutrition Methods

Message from the Guest Editors

Alternative plant nutrition methods offer several advantages and disadvantages compared to traditional soil-based cultivation with chemical fertilizers. They offer promising solutions to address sustainability challenges in agriculture, providing efficient resource use and reduced environmental impact. Some of the advantages of using alternative plant nutrition methods and materials include environmental sustainability, improved nutrient efficiency, reduced pest and disease pressure, and diverse applications and adaptability. On the other hand, in using alternative nutrient methods, we should also consider the risk of system failures, limited crop variety and market acceptance, dependency on external resources, regulatory and certification challenges, and maybe higher initial levels of investment. This Special Issue of *Plants* welcomes research articles, reviews, and short communications related to the investigation of the effects of alternative plant nutrient materials and methods on plants. In addition, multidisciplinary studies, including systems biology, molecular biology, and genetic, physiological, and biochemical approaches, are also appreciated.

Guest Editors

Dr. Brigitta Tóth

Dr. Makoena Joyce Moloi

Dr. Csilla Tóth

Deadline for manuscript submissions

31 December 2025



Plants

an Open Access Journal
by MDPI

Impact Factor 4.1
CiteScore 7.6
Indexed in PubMed



mdpi.com/si/210930

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

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





Plants

an Open Access Journal
by MDPI

Impact Factor 4.1
CiteScore 7.6
Indexed in PubMed



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



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)