

## Special Issue

# Plant Stress Physiology and Ecophysiological Responses to Environmental Challenges

### Message from the Guest Editor

Plants' responses vary depending on plant genotype, developmental stage, and prior stress exposure. Understanding these mechanisms is key to predicting plant performance under variable environmental conditions. In agriculture, applying this knowledge helps improve crop resilience through stress-tolerant breeding, optimized resource use, and integrated management practices—critical steps for maintaining productivity in the face of climate uncertainty. This Special Issue invites original research articles, reviews, and short communications that explore plant responses to environmental stressors from a physiological and ecophysiological standpoint. While the focus is on crop species, studies involving model or wild plants that contribute to our understanding of stress responses are equally welcome. We particularly encourage multidisciplinary approaches that integrate molecular biology, genetics, biochemistry, and systems biology with classical and modern plant physiology.

---

### Guest Editor

Dr. Brigitta Tóth

Institute of Food Science, Faculty of Agricultural and Food Sciences and Environmental Management, University of Debrecen, H-4032 Debrecen, Hungary

---

### Deadline for manuscript submissions

31 July 2026



## Plants

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.1  
CiteScore 7.6  
Indexed in PubMed



[mdpi.com/si/248644](https://mdpi.com/si/248644)

*Plants*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[plants@mdpi.com](mailto: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, and 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)