

## Special Issue

# Potato Production: From Quality Formation to Stress Tolerance

### Message from the Guest Editors

Potatoes, as the fourth major food crop, contain sufficient amounts of protein, starch, carbohydrates, essential amino acids, vitamins and minerals, essential for human nutrition. It is very important to improve their productivity for food security in a growing population. However, potato plants are highly susceptible to abiotic stresses such as high temperature, drought, soil salinization and attacks by diseases and insect pests. Potatoes are grown primarily for their tubers. Any stress that negatively affects the tuber formation process may result in reduced tuber yield and quality. To maintain the sustainable development of potato production, we need to understand the impact of stress-related physiological, biochemical and molecular processes on potato quality development, while developing stress-tolerant potato varieties that are appropriately modified for changing environments. This Special Issue of *Plants* aims to provide an overview of current research and knowledge regarding potato production, as well as genetics, genomics and biotechnology approaches to study potato quality formation and stress adaptation.

### Guest Editors

Dr. Lord Abbey

Department Plant Food, and Environmental Sciences, Faculty of Agriculture, Dal-housie University, Bible Hill, NS B2N5E3, Canada

Prof. Dr. Peng Zhang

1. National Key Laboratory of Plant Molecular Genetics, Center for Excellence in Molecular Plant Sciences, Chinese Academy of Sciences, Shanghai 200032, China

2. University of Chinese Academy of Sciences, Beijing 100049, China

### Deadline for manuscript submissions

closed (28 February 2025)



## Plants

an Open Access Journal  
by MDPI

Impact Factor 4.1  
CiteScore 7.6  
Indexed in PubMed



[mdpi.com/si/192259](https://mdpi.com/si/192259)

*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, 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)