



Phytic Acid and Mineral Biofortification Strategies: From Plant Science to Breeding and Biotechnological Approaches

Guest Editors:

Dr. Eleonora Cominelli

Istituto di Biologia e
Biotecnologia Agraria, CNR,
Milano, Italy

Dr. Francesca Sparvoli

Istituto di Biologia e
Biotecnologia Agraria, CNR,
Milano, Italy

Prof. Dr. Roberto Pilu

Department of Agricultural and
Environmental Sciences—
Production, Landscape,
Agroenergy, Università degli
Studi di Milano, Via G. Celoria 2,
20133 Milan, Italy

Deadline for manuscript
submissions:

closed (30 November 2019)

Message from the Guest Editors

Mineral deficiencies, particularly for iron and zinc, affect over two billion people worldwide. Mineral biofortification includes different approaches aimed to increase the level and/or bioavailability of minerals in the edible parts of the plants, particularly the seeds. Two main strategies to biofortify seeds consist in: i) reduction in the content of phytic acid, one of the main “antinutrients” affecting mineral bioavailability; ii) increase in the concentration of minerals.

Breeding programs or transgenic approaches aimed to develop biofortified crops should exploit basic plant science results in order to maximize the utility of the modified crops, avoiding the display of negative pleiotropic effects.

This Special Issue aims to highlight new developments in our understanding of how perturbation in phytic acid content and in seed mineral accumulation contributes to plant function, growth, and response to the environment.

Contributions to this Special Issue are invited from scientists working at all system levels, including the molecule, cell, organism and environment/ecological perspectives.





an Open Access Journal by MDPI

Editor-in-Chief

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

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.

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)

Contact Us

Plants Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/plants
plants@mdpi.com
[X@Plants_MDPI](https://twitter.com/Plants_MDPI)