



Root Development, Physical and Nutritional Stress in Plants

Guest Editors:

Dr. Tracy Valentine

Plant Soils Interaction, Ecological Sciences, The James Hutton Insititute, Dundee, Scotland, UK

Dr. Surya Kant

1. Agriculture Victoria, Grains Innovation Park, 110 Natimuk Rd, Horsham, VIC 3400, Australia
2. School of Applied Systems Biology, La Trobe University, Bundoora, VIC 3083, Australia

Deadline for manuscript submissions:

closed (30 September 2023)

Message from the Guest Editors

Dear Colleagues,

Root development, in terms of root system architecture, i.e., size and shape, together with micro-traits (such as root hairs and a relative capacity to take up individual nutrients via uptake channels), is key within the complex system of the soil–plant continuum that influences plant nutritional status. Roots influenced by genotype are also highly influenced in their development by their environment. Natural soil environments can be very heterogenous, in terms of physical and nutrient status, in contrast to many contained environment systems used for screening root systems. There is still uncertainty surrounding the impacts of root traits in these plant–soil systems in terms of nutrient flows, and how we can ensure that crops are future-proofed to maintain yields and ensure nutritious crops in line with the UN sustainability goals.

This Special Issue aims to highlight adaptive root (and plant) traits that influence the optimal uptake and utilization nutrients from the soil in a wide range of environments.





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 (*Plant Science*)

Contact Us

Plants
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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

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