

Special Issue

Root Formation and Propagation of Ornamentals

Message from the Guest Editor

In ornamental crop nurseries, diverse propagation techniques are used to ensure high yield and quality, yet root formation remains a critical limiting step in sexual and asexual propagation. Inconsistent results often arise from genetic, physiological, and environmental interactions, affecting commercial viability and scalability. Traditional cutting propagation, including synthetic auxins and controlled environments, has long been foundational, but recent studies emphasize sustainable approaches. Natural biostimulants, microbial consortia, and bio-based rooting agents are emerging as alternatives to conventional chemicals, enhancing resilience and root development. Advances in growing media, including alternative by-products, further improve root quality. Molecular tools, such as transcriptomic analysis of rooting-related genes, can increase predictability and efficiency. This Special Issue aims to consolidate these advances, fostering dialogue across plant physiology, molecular biology, agronomy, and biotechnology to promote efficient, sustainable, and reproducible propagation protocols for ornamental plants.

Guest Editor

Dr. Giuseppe Cristiano

Department of Soil, Plant and Food Sciences (Di.S.S.P.A.), University of Bari "Aldo Moro", Via Amendola 165/A, 70126 Bari, Italy

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

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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

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