

Special Issue

Applications of Plant Biotechnology and Tissue Culture Techniques for Plant Production and Food Security

Message from the Guest Editors

The increasing world population and demand of food, the scarcity of irrigation water and various environmental stresses are the major challenges in achieving food security. New plant biotechnology approaches, coupled with tissue culture techniques, are being employed to increase and improve the production of agronomical and horticultural crops and several herbs and medicinal plant species. The application of the plant tissue culture method facilitates genetic improvements, plant breeding and the production of diseases-free plants; reduces the costs of commercial production and rescues endemic, endangered plant species. The use of doubled haploid technologies (isolated microspore/anther and unpollinated ovule culture in vitro) greatly accelerates the breeding process and increases the genetic diversity. This Special Issue invites researchers to contribute their work on plant production and crop improvement using plant tissue culture and biotechnology methods.

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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, 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.

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