Special Issue

Controlled Environment Horticulture: Indoor Farming and Novel Cultivation Technologies

Message from the Guest Editors

Controlled environment horticulture is essential for addressing challenges related to high-quality horticultural production and the growing impact of traditional agricultural cultivation caused by climate change. This Special Issue aims to present innovative studies and techniques successfully utilized in plant factories or modern greenhouses. These include the following: using LED lighting in efficient seedling and plant cultivation (exploring techniques and mechanisms on plant light quality, light intensity, light period, etc.), energy-saving technologies (the specialized selection of certain varieties; highly efficient light, temperature, humidity, CO2, and irrigation control technologies, etc.), technologies for growing high-quality fruit and vegetables (nutrient solutions, far-red and ultraviolet light, substrates, grafting, hormones, etc.), plant growth models, and other approaches that enhance the efficiency and sustainability of controlled environment horticultural crops. We welcome original studies or review papers on these techniques and look forward to receiving your manuscripts to share these advancements with the scientific community.

Guest Editors

Prof. Dr. Xiaotao Ding

Prof. Dr. Liying Chang

Prof. Dr. Qingliang Niu

Deadline for manuscript submissions

closed (28 October 2025)



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About the Journal

Message from the Editor-in-Chief

Horticultural plants and their products provide sustenance, health, and beauty. A confluence of factors is putting increasing pressure on horticultural production to evolve, and innovative research is addressing these challenges. *Horticulturae* provides a venue to communicate research results in a rapid manner with open access, allowing everyone the opportunity to stay abreast of leading research addressing horticulture. I invite you to consider publishing the results of your research in this high quality, peer-reviewed journal.

Editor-in-Chief

Prof. Dr. Luigi De Bellis

Department of Biological and Environmental Sciences and Technologies (DiSTeBA), Salento University, Lecce, Italy

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