Special Issue

Impact of Light on Horticultural Crops

Message from the Guest Editors

Light is an essential factor for the growth and quality of horticultural plants and its effects depend upon parameters such as duration, intensity and quality. It is an energy source for photosynthesis as well as a signal triggering plant photomorphogenesis and physiological, biochemical and molecular responses. However, solar light strongly differs between winter and summer conditions, with excess light in open field cultivations imposing severe stress on plants, especially during summer months, while supplementary light sources are implemented in greenhouse crop production to complement natural light when it is insufficient. On the other hand, artificial lighting is used as the sole lighting source in plant factories and nurseries. In order to enhance sustainability and profitability, light must be studied and efficiently applied within horticultural crop production. Novel technologies such as light-emitting diodes, new transparent greenhouse covering materials, photoselective nettings, growth chambers and plant factories showcase the critical role of light interacting with plants from the level of seed germination to growth rate, product quality and postharvest storage.

Guest Editors

Dr. Athanasios Koukounaras

Department of Horticulture, Aristotle University, 54124 Thessaloniki, Greece

Dr. Filippos Bantis

Department of Horticulture, Aristotle University, 54124 Thessaloniki, Greece

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

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Agriculture (ISSN 2077-0472) is an international, cross-disciplinary and scholarly journal on the science and technology of crop and animal production, and management of the natural resource base for agricultural production. We invite submissions from authors according to the aims and scope of the journal described in more detail on this page. Agriculture is published in an open access format – articles are published on the journal's website immediately after acceptance, giving the scientific community and the public unlimited and free access to the content.

Editor-in-Chief

Prof. Dr. Les Copeland

Sydney Institute of Agriculture, School of Life and Environmental Sciences, The University of Sydney, Sydney, NSW 2006, Australia

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