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Horticulturae — An International, Multidisciplinary, Open Access Journal

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Editorial

***Horticulturae* — An International, Multidisciplinary, Open Access Journal**

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Horticulture plays an integral role in human existence. As foods, in interior surroundings and exterior landscapes, and in forms of artistic expression, there is no social group worldwide for whom horticulture has not played a profound role [1]. Horticultural plants and their products provide critical nutrition and nutraceutical compounds which sustain life, provide environments for leisure, recreation, and improved mental health, and play essential roles in ecology and biodiversity. As the population grows, horticulture is destined to play increasingly critical roles in maintaining human health and happiness.

Horticulture has been defined as “the controlled manipulation of plant reproduction, growth and fruiting applied to crop production, environmental care or social benefit” [2]. Basic science plays the key role addressing the need to manipulate horticultural commodities, and the knowledge must then be applied in a variety of ways to achieve desired goals. This may include genetic and molecular manipulation of plant biology, new technologies to monitor and regulate biological processes of the living tissues comprising horticultural crops, and even new marketing structures to facilitate rapid distribution to consumers.

The global horticultural picture shows the profound economic impacts of horticulture [3]. Horticultural commodities are most often intensively cultivated, whether annual or perennial, and may be grown in large monocultural systems for widespread distribution as well as in small, diverse, integrated multi-cropped systems for local markets. They can have some of the highest economic value of all crops to the grower/producer, and are frequently amenable to development of value-added products, further increasing their value and market opportunities. The supply chain, extending from production and harvest to handling and distribution, and then to consumption and/or use, further amplifies the economic impact, such that it can be significant for the grower, the surrounding local community, and the resident nation.

A confluence of factors is putting increasing pressure on horticultural production to evolve to meet future needs [3]. These factors include the anticipated population growth in the next 50 years and consequent ballooning demand for horticultural commodities; changing patterns of consumer

preference for healthier and fresher foods; diminishing land and water resources available for crop production; the need to increase the sustainability of production systems so as to reduce both the need for costly external inputs and attendant environmental degradation; improving postharvest and marketing chains to maintain quality and nutritive value and reduce wastage; the integration of robotics and communication and information nanotechnologies into the supply chains; and, the expected and unexpected effects of climate change.

Research to address these challenges on any and all parts of the horticultural supply chain will encompass innovations in science, technology, and economics, as well as on the means to effectively disseminate and extend the knowledge to the relevant clientele groups comprising the chains. This new journal, *Horticulturae*, is positioned to provide a scholarly, open access forum for publication of research on all areas of temperate to tropical horticulture and related disciplines. Original empirical and theoretical research articles, from the basic to the applied, as well as short notes, reviews, and opinion articles, meeting rigorous peer review standards will be published. There is no restriction on manuscript length, so detailed experimental data and methods can be presented. Ideas for special issues that provide a comprehensive analysis of critical, cutting-edge topics are encouraged. The journal seeks to maintain a rapid peer-review and publication process, within weeks from submission, provided that no major revisions are required. Thus, *Horticulturae* provides a venue to communicate results in a timely manner in an open venue, with no subscription or membership barriers allowing anyone with Internet access the opportunity to stay abreast of leading research pertaining to horticulture.

Along with the Editorial Board, I look forward to helping establish *Horticulturae* as a journal of choice for the publication of high quality research on all aspects of the horticultural supply chain. I invite you to submit your articles to *Horticulturae*, as well as your comments and ideas that can contribute to making this journal an essential platform for discussion of all things horticultural.

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