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Plant-Based, Proximal and Remote Sensing in Orchards and Vineyards — State of the Art, Challenges, Data Fusion and Integration

Guest Editors:

Dr. Alessio Scalisi
Tatura SmartFarm, Agriculture Victoria, 255 Ferguson Rd, Tatura, VIC 3616, Australia

Dr. Mark Glenn O'Connell
Tatura SmartFarm, Agriculture Victoria, 255 Ferguson Rd, Tatura, VIC 3616, Australia

Dr. Ian Goodwin
Tatura SmartFarm, Agriculture Victoria, 255 Ferguson Rd, Tatura, VIC 3616, Australia

Deadline for manuscript submissions:
closed (30 April 2024)

Message from the Guest Editors

Orchard and vineyard management is rapidly changing as we navigate a fast-paced revolution often referred to as Agriculture 4.0.

Plant-based or contact sensing (e.g., trunk and fruit dendrometry, near-infrared and fluorescence spectroscopy) obtains the most accurate information on plants' physiological responses to biotic and abiotic stress at a tree level and on a continuous time scale. Proximal and remote sensing (e.g., machine vision, LiDAR, multispectral and hyperspectral) from ground or aerial platforms and satellites allows for the collection of larger datasets that can provide more detailed spatial information across orchard blocks. Data fusion and integration from different plant-based, proximal and remote sensors and/or data sources remains a practical challenge, but successful attempts can provide the most consistent and accurate data and information about orchards and vineyards.

This Special Issue aims to collect state-of-the-art research on innovative plant-based, proximal and remote sensors used to collect data in orchards and vineyards and on their data fusion and integration to inform orchard management decisions

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Special Issue

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Editor-in-Chief

Prof. Dr. Luigi De Bellis
Department of Biological and Environmental Sciences and Technologies, Università del Salento, Centro Ecotekne, via Provinciale Lecce Monteroni, 73100 Lecce, Italy

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.

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Contact Us

Horticulturae Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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mdpi.com/journal/horticulturae
horticulturae@mdpi.com
𝕏@Horticul_MDPI