

Special Issue on

Pre-harvest and Post-harvest Factors Improving Horticultural Sustainability, Product Quality, and Post-harvest Performances 2024

CALL FOR PAPERS

Improving crop quality and shelf life is a challenge in the context of the global horticultural food supply. Horticultural crops are an important source of carbohydrates, proteins, organic acids, vitamins, and minerals for human nutrition and health. In addition to the health benefits that can be derived from their consumption, fruits and vegetables can also function as precious sources of bioactive compounds for food functionalization or nutraceutical preparations. To improve quality and reduce losses, producers and handlers must understand the biological, environmental, and technological factors that affect quality and deterioration.

Fresh horticultural crops are living tissues subject to continuous changes after harvest. Fresh horticultural crops are high in water content and, for that reason, are subject to weight loss and mechanical injury. Horticultural commodities are perishable products with active metabolism, subjected to extensive post-harvest losses through microbial decay, physical injury, and senescence during post-harvest life. Post-harvest changes in horticultural crops cannot be stopped, but they can be slowed within certain limits. Maintenance or improvement of the post-harvest life of fresh horticultural crops is becoming increasingly important. Indeed, appropriate pre-harvest and post-harvest handling and technology play a key role in increasing food availability and maintaining food quality. Fresh horticultural crops are different in terms of morphological structure (roots, stems, leaves, flowers, fruits, etc.), in composition, and in general physiology, for that reason, commodities requirements and recommendations to maintain quality and improve post-harvest life vary among the products. The connection between quality build-up in the pre-harvest period and its impact on the technological quality traits has been frequently overlooked, and detailed knowledge is still missing. The quality parameters of fruits and vegetables include size, visual attractiveness (color, shape), taste, health benefits, shelf life, suitability for processing, and so on. During the production chain, specific criteria prevail depending on the product's final destination, either the fresh market or the processing industry. During post-harvest life, as maturation progresses, genetic, chemical, and environmental control can help to maintain product quality. Improving shelf life, maintaining quality, and reducing waste while reducing the use of chemicals is mandatory to meet consumer demand and reduce losses along the food chain.

The aim of this Special Issue is to highlight and describe recent research on pre-harvest and post-harvest factors and technologies that affect the sustainability, quality, and shelf-life of horticultural products (fresh and processed). Original research and review articles are welcome.

Potential topics include but are not limited to the following:

- ▶ Emerging agronomic practices and technologies to preserve soil fertility and enhance quality and shelf life of fruits and vegetables
- ▶ Emerging technologies to enhance and verify safety (microbiological analysis and antimicrobial agents), health, and sustainability of fresh and minimally processed fruits and vegetables
- ▶ Physiology and technology of fresh and minimally processed products, factors affecting quality changes and shelf life, quality evaluation
- ▶ Controlled and modified atmosphere packaging (MAP) and edible coating application and composition
- ▶ Effect of harvest, handling, processing, storage, and distribution on quality, nutritional, and nutraceutical parameters.
- ▶ Factors that affect quality losses and waste in the food chain.
- ▶ Sensory analysis and consumer acceptance of fresh and minimally processed products.

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.wiley.com/submit?specialIssue=591754>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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