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Editorial

Principles and Practices in Fruit Tree Production and Postharvest Management

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In the near future, the world's population will face serious challenges due to continuous growth, global climate change, and limited natural resources [1]. The agricultural sector needs to adapt to these challenges and provide sustainable methods in order to cover the global need for food, while protecting biodiversity and the ecosystem [2]. Fruit trees are, in many cultures, the primary source of vitamins, antioxidants, and dietary fibers, and their health benefits are continuously highlighted by many research groups. Proper management techniques, from the initial stage of grove establishment to the annual cultivation principles, could mitigate the negative impact of climate change; preserve natural resources, such as water and nutrients within the root zone; optimize the usage of agricultural inputs; and provide quality fruits with superior nutritional value [3]. Postharvest treatments are equally as important as the preharvest ones. Proper postharvest fruit management could sustain fruits' qualitative attributes, minimize pathogen-related losses, minimize chemical residues, and prolong shelf-life in order to meet future food needs [4]. Proper and precise cultivation techniques coupled with the orthological usage of resources will lead towards more profitable and sustainable agriculture.

The papers in this Special Issue are review and research articles which provide novel data concerning the impact of preharvest agricultural practices upon fruit quality and abiotic stress alleviation of a wide range of tree crops, such as citrus, dragon fruit, mango, apple and sweet cherry. In the review paper of Ziogas et al. [3], it was emphasized that appropriate agronomic cultivation techniques such as deficit irrigation, the use of biostimulants, hydrogel, and compost, sophisticated fertilizer application, chemical priming, and rootstock selection can alleviate the negative impacts of salinity and drought stress in citriculture. Also, the impact of semi-arid climate upon the physiological composition and mineral profile of dragon fruit was evaluated in the work of Singh et al. [5]. In their work, it was suggested that under semi-arid cultivation conditions, the optimal food value and improved postharvest handling could be achieved when red-fleshed dragon fruits are harvested between 35 and 40 days after anthesis [5]. Additionally, in the work of Gianguzzi et al. [6], it was shown that harvest date has a direct impact upon fruit quality attributes, shelf-life, and consumer acceptance of mango fruit. The effect of proper cultivation methods upon apples has been evaluated by Sidhu et al. [7]. In their work, it was concluded that proper crop load via thinning methods can influence tree yield, nutrient content, fruit quality, and the appearance of physiological disorders in 'Scilate' apples [7]. Furthermore, in the work of Javed et al. [8], it was proposed that the application of hot water before the storage of mango fruit has a positive impact upon fruit quality attributes and can extend the shelf-life of the commodity. Also, in this Special Issue, the efficacy of foliar spray application of alternative products has been considered. In the work of Matteo et al. [9], the foliar spray of calcium along with the implementation of early fruit load thinning had a positive effect on fruit quality and fruit shelf-life preservation. Also, in the work of Mikiciuk et al. [10], it was found that the foliar spray of methyl-anthranilate-based repellent, upon sweet cherries, had no influence on the chemical profile of the fruit and leaves. The application of the compound did not affect the cracking susceptibility of the cherry fruits and this

Citation: Ziogas, V. Principles and Practices in Fruit Tree Production and Postharvest Management. *Agronomy* **2023**, *13*, 408. https://doi.org/10.3390/agronomy13020408

Received: 14 January 2023
Accepted: 29 January 2023
Published: 30 January 2023

compound can be used as an alternative crop protector against birds [10]. The foliar spray of sweet cherry with abscisic acid has a positive impact upon the fruit quality of various cultivars, as has been proposed in the work of Time et al. [11]. Furthermore, in the work of Carrion-Antoli et al. [12] it was proposed that the foliar application of the phyto-regulator melatonin, at three-time intervals, during fruit developmental stages, can improve crop yield and quality traits and exert a beneficial effect upon human health indexes.

The guest editor would like to thank all of the authors who had the willingness to contribute to this Special Issue. The scientific knowledge that is presented in this Special Issue shows the progress that has been made towards the implementation of novel cultivation methods which can benefit fruit production and the postharvest handling of tree fruits.

Funding: This research received no external funding.

Data Availability Statement: Not applicable.

Conflicts of Interest: The author declares no conflict of interest.

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