

**P-131 (55)****RECENT ADVANCES ON THE USE OF PHYTOCHEMICALS FOR PREVENTING POSTHARVEST LOSSES IN FRUIT, VEGETABLES AND FRESH CUT PRODUCTS**

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Horticultural crops mainly fresh fruits, vegetables and fresh cut products are very perishable due to biological activities and pathological agents. The main method for decreasing postharvest losses of these products is the use of chemicals during postharvest technology. But nowadays, due to food safety issues and environmental concerns, the use of chemicals during production and postharvest management of food products is highly restricted and it is necessary to introduce safe nonchemical methods and compounds during different production and storage stages. For this purpose the most important strategy is to help the harvested crops and minimally processed fruits to defend themselves against pathogens and decrease metabolic activities. According to recent studies some phytochemicals such as salicylic acid, methyl jasmonate, brassinostroides, polyamines and nitric oxide have been shown to have good potentials for inducing defense systems of harvested fruit, vegetables and fresh cut products against postharvest pathogens and pests. Also these natural and safe compounds have shown to decrease the metabolic activities mainly respiration and ethylene production in different crops. In this paper some data from recent research projects on the effects of abovementioned phytochemicals on total antioxidant and defense enzymes activity as well as metabolic activities and quality attributes of harvested horticultural crops have been summarized.

**Keywords:** Brassinostroids; Food safety; Polyamines; Methyl jasmonate; Nitric oxide; Salicylic acid