Effect of Pre- and Post-harvest Treatments on Quality and Storability of "Manfalouty" Pomegranates under Room Temperature

Abstract:

This study was carried out during 2011 and 2012 seasons on "Manfalouty" pomegranate cv. grown at the experimental orchard of Pomology Department, Faculty of Agriculture, Assiut University. The objectives of this study were examining the effects of pre-harvest spray with CaCl2 (4%) and GA3 (100 ppm) as well as post-harvest treatments with jasmine oil (2.5 cm3/L), olive oil (2.5 cm3/L), fiber gard (20 cm3/L) and wrapping individually fruit with food polyolefin stretch as an improving effect in physicochemical characteristics of "Manfalouty" pomegranate cv. during storage under room temperature (22±5°C). The experiments were set up on split-plot arrangements in complete randomized block design (CRBD), with three replicates, 20 fruits each. According to the obtained results of this study, it could be deduced that pre-harvest spray with GA3 (100 ppm) gave in general, the best results on improving physical and chemical characteristics, followed by CaCl2 (4%) during the two growth seasons, as well as wrapping individually fruits with food polyolefin stretch gave the best quality during shelf-life period, followed by dipping fruits in both jasmine oil or olive oil and fiber gard during fruit storage under room temperature. Therefore, the authors recommended with wrapping individually fruits to keep fruits with good quality during fruit storage under room temperature.

Keywords:

GA3, CaCl2, Manfalouty pomegranate, natural oils and food polyolefin stretch

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