P-59

Effects of pre-harvest ethrel spraying on post-harvest quality of sour cherry fruits

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Abstract
The ethrel (2-chloroethylphosphonic acid) was used properly for reducing fruit removal force and facilitate harvesting process. In this research, the effect of preharvest ethrel application on the quality of sour cherry during the storage period at modified atmosphere packaging (MAP) and 0°C temperature. The quality of Sour Cherry fruits after spraying by Ethrel under modified atmosphere packaging was investigated. Modified atmosphere packaging was used with 10, 15 and 75 percent for O_2, CO_2 and N_2 respectively. This composition of gas by being held at 0°C caused to increase the postharvest shelf life of fruits. Fruit samples were evaluated at harvest date and after 6 weeks of being kept in storage. Weight loss, skin colour, pH, soluble solids content (SSC), titrateable acidity (TA), SSC/TA ratio, firmness of fruits were monitored. The ethrel concentration influenced to increasing soluble solids content, SSC/TA ratio and L* value and decreasing titrateable acidity at harvest date. Fruits colour became darker after 6 weeks of being kept in storage.