Title Optimizing short term storage of sour cherries

Authors S. Lurie, A. Weksler

Citation ISHS Acta Horticulturae 795:799-804 . 2008.

Keywords *Prunus cerasus*; decay; ethanol; fruit quality; gibberellins; modified atmosphere packaging

Abstract

Storage trials of 'Chios' sour cherries (*Prunus cerasus* L.) were conducted to find the optimum treatment of the fruit for storage of 2 weeks. Sour cherries are softer than sweet cherries (P. *avium* L.) and were damaged by the shower hydrocooling method used to remove field heat from sweet cherry fruit. However, a preharvest gibberellin spray enhanced their firmness and increased their storage potential. The main problem observed was development of decay following storage and shelf life. It was found that fruit stored better in modified atmosphere packaging than in regular air storage at 0°C. CO2 concentrations of 5% or higher inside the packages had a fungistatic effect on the development of decay. A prestorage dip in 30% ethanol was additive to the effect of the modified atmosphere in preventing decay development, and the combined treatment had the lowest levels of decay following storage and 2 days at 20°C. The main decay organisms were *Alternaria alternata*, *Botrytis cinerea*, *Cladisporium* sp. and *Penicillium expansum*. A protocol was developed to store sour cherries for three weeks with minimum levels of decay or damage.