Abstract:

The influence of ethylene contamination on quality attributes, brown rot (Monilinia fructicola) decay development and internal breakdown during long-term cold storage at 0 and 5 ºC was investigated on climacteric and nonclimacteric stone fruits. Quality attributes such as fruit flesh firmness, soluble solids concentration, titratable acidity, stem browning, and flesh and ground color were not affected by constant ethylene exposure during long-term cold storage at 0, 5, or 10 ºC. Constant ethylene exposure did not affect decay development, expressed as lesion size and incidence, on peaches, plums, nectarines and cherries wound-inoculated with *M. fructicola* during long-term cold storage. In peaches (*Prunus persica*), ethylene treatments did not affect development of visual mealiness symptoms. In one case, flesh mealiness symptoms were delayed by ethylene present during storage. This work indicates that there is no commercial benefit to ethylene removal during cold storage for peaches, nectarines (*P. persica* var. *nucipersica*), plums (*P. salicina*) and cherries (*P. avium*).