INFLUENCE OF DELAYED CA STORAGE ON ASCORBIC ACID CONTENT AND BROWNHEART INCIDENCE IN ‘ROCHA’ PEAR

Moraes, A. M. M. B. *; Avejar, M. L. **; and Rodrigues, A. C. **

* Escola Superior de Biotecnologia, Universidade Católica Portuguesa, Rua Dr. António Bernardino de Almeida, 4200-072 Porto; ** Estação Nacional de Fruticultura Vieira Natividade, Est. de Leiria, Ap.158, 2460 Alcobaca; Portugal
Email: amorais@esb.ucp.pt

One problem that may arise during long term CA storage of pears is the increase of brownheart incidence. Vitamin C, a natural compound of pear, is believed to have a protective action against brownheart. The objective of this work was to seek eventual relationship/brownheart incidence and ascorbic acid content of ‘Rocha’ pear after delayed CA storage. The fruits were picked from five orchards, at the optimal harvest date for the region (west) and stored under two CA conditions (2%O₂+0.5%CO₂ and 2%O₂+1.5%CO₂) after different periods of delay. The fruits from one particular orchard showed the lowest sensibility to brownheart incidence and presented an L-ascorbic acid (AA) content generally higher than fruits from the other orchards. After four months of storage in both CA conditions, fruits that had been submitted to CA directly after picking and to CA with 20 days of delay were generally more affected by brownheart than those stored under any other condition. Fruits submitted to 40 and 60 days delay presented tendency to AA higher than samples submitted to 20 days delay. There was no clear difference between the AA content of fruits that had been stored under different CA conditions.