

Title The influence of controlled atmosphere and rootstock on the quality of 'Van' sweet cherry
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Abstract

The effect of storage regimes – normal atmosphere (NA) and different kinds of controlled atmospheres (CA₁ = 2.5% O₂ + 10% CO₂; CA₂ = 2.5% O₂ + 15% CO₂; CA₃ = 2.5% O₂ + 20% CO₂) –, 4 rootstocks (Gisela 5, *Prunus avium*, CAB 11E and Maxma 14) and two harvest dates (June 12 and 16, 2003) on the quality of 'Van' sweet cherries were evaluated. One sample from each rootstock and harvest date was prepared and some sub-samples were analyzed at the laboratory, while the other sub-samples were stored at 0.5°C (±0.5) for 42 days, both in NA and CA. At the end of the storage period, all sub-samples were analyzed for fruit quality, using objective and subjective analyses. Storage regime, rootstock and harvest date significantly influenced all the studied parameters of quality: fruit weight, firmness, titratable acidity, soluble solids content, skin colour (L*C*H°), stem colour (L_s*a_s*) and sensory attributes. Fruit size, titratable acidity, L*(Lightness), and C* (Chroma) were higher on fruits from more vigorous rootstocks (*Prunus avium*). Fruits from trees on *Prunus avium* were the ones to have better appearance and taste after storage. The tasting panel considered that the fruits stored in controlled atmosphere (CA₂) had better quality and that fruits from harvest 2 were more attractive after storage than those of harvest 1.