

**Title** Post-harvest performance of 'Abate Fetel' pears grown in Argentina in relation to harvest time

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#### **Abstract**

The area planted with 'Abate Fetel' pears has increased in Argentina in recent years, and the trend suggests it will continue to increase in the near future. Because the information available for harvest and postharvest handling is limited, the aim of this study was to generate new local information on maturity indexes and 1-MCP effect on ripening, superficial scald, and friction discoloration. Four harvest dates were evaluated, from 23 January to 16 February. The results showed that the maturity parameters most closely related to the advance of maturity were firmness, skin color and starch degradation. Fruit harvested on 23 January and 6 February was treated with 0 or 0.30  $\mu\text{l L}^{-1}$  1-MCP and then stored at  $-0.5^{\circ}\text{C}$  for 60 and 120 days. 1-MCP treatment significantly reduced ethylene production and fruit ripening for the two harvest dates after 60 and 120 days of storage and subsequent shelf life. Fruit firmness and color were the most affected parameters, and to a lesser extent, titratable acidity. Superficial scald developed only in control fruit after 120 days, affecting 18 and 33% of the fruit harvested on 23 January and 6 February, respectively. 1-MCP controlled the disorder completely. Susceptibility to this disorder was not related to maturity at harvest, but the percentage of fruit affected by friction discoloration was greater in late harvested fruit and it increased as storage extended. 1-MCP reduced the number of fruit with moderate and severe friction discoloration.