

Use of an abscission agent for harvesting mandarins in Spain

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Acta Horticulturae 965: 105-110. 2012.

Abstract

Spain accounts for more than 55% of the European citrus production and is predominantly oriented towards fresh market. Harvesting accounts for more than 50% of production costs and methods of mass harvesting are under research. Abscission agents decrease fruit detachment force of mature fruits before harvest, thus improving harvesting machines performance. However, they may affect the production of the following season or blemish the fruit skin, making the product unmarketable for whole fruit, fresh consumption. This work was aimed at studying whether the application of ethephon improves mechanical harvesting of mandarins and affects the quality of fruit, the physiology and yield of trees. Trees were harvested with a trunk shaker, and ethephon was sprayed at 600 and 1200 mg/L in 4 and 7 L/tree applications in commercial orchards. The use of ethephon affected the amount of radiation intercepted by the canopy at long term in the first year, but it did not in the second year. It also slightly improved fruit removal but increased defoliation.