

Effect of postharvest treatments of mechanically harvested 'Manzanilla' table olives on product quality

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Abstract

'Manzanilla', today's main table olive cultivar, is traditionally harvested manually. However, manual harvesting is becoming less economically feasible due to increasing labor costs and a shortage of workers. Consequently, we examined options for mechanical harvesting of these table olives. The 'Manzanilla' fruit skin is sensitive to bruising and damage caused by mechanical harvesting. Therefore, postharvest field (PHF) treatments were studied, to reduce the percentage of damaged fruit in the final product. The effect of PHF treatments on final product quality of mechanically harvested 'Manzanilla' table olives was studied over 6 consecutive years (2011–2016). In the first part of the study (2011–2013), a wide range of treatments was tested in 2 L containers; the most promising one seemed to be immersing the fruit in a 1 % NaOH solution immediately after harvest. Later in the study, this treatment was also tested in commercial-scale containers, with acceptable results, although there was a certain variability between years and even between different olive batches in the same year. Although the grower wishing to apply such a treatment is faced with a certain logistical challenge, it allows for the possibility of applying mechanical harvesting to 'Manzanilla', a procedure which, until now, has been considered unsuitable for this table olive cultivar.