

Title Air and immersion heat treatments affect ethylene production and organoleptic quality of 'Dixiland' peaches

Author C.O. Budde, G. Polenta, C.D. Lucangeli and R.E. Murray

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Abstract

This research was conducted to evaluate the effect of air and water heat treatments (HT) on maturity indexes and ethylene evolution in Dixiland peaches. Ethylene was measured in a pool of three fruit at different intervals after treatment application. Firmness, ground and flesh colour, soluble solid content (SSC), and titratable acidity (TA) were analyzed at harvest, at the end heat treatments, and when fruit were ripe.

Air heat treatments affected fruit quality by diminishing total acidity and increasing red pigments in flesh and peel. Ethylene evolution did not change in fruit treated by immersion during short periods, but was increased when heat treatment was applied by air for long periods. These results showed that air heat treatments may change organoleptic quality of peaches. Because immersion treatments are milder than air treatment and had no effect on ethylene production, changes induced will be less dramatic and some negative effects on quality can be avoided. This constitutes an interesting technological alternative that deserves to be explored in a greater depth.