

Title Premature fruit softening, a major physiological problem of persimmon in subtropical Australia

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Abstract

Premature or abnormal softening of persimmon fruit within 3-7 days after harvest is a major physiological problem of non-astringent persimmon cultivars grown in subtropical regions of Australia. Up to 30% of consignments may soften rapidly frequently overnight, often resulting in the flesh becoming very soft, completely translucent, and impossible to handle. Incidence of premature soft fruit can vary with season and production location. To study the incidence of this problem, we conducted surveys of fruit harvested from five environmentally-diverse regions of Australia over a two-year period. We found wide variation in the rate of both premature softening and normal softening with differences of up 37 days between orchards in percentage of fruit reaching 50% soft. We found that the rate of fruit softening was exacerbated by lower calcium concentrations at fruit set, shorter fruit development periods and heavier rainfall during the fruit development period. The implications of our findings, in terms of orchard management, export and domestic marketing strategies are discussed.