

Title Use of preharvest ethephon applications to reduce breba crop load and postharvest performance evaluations of fresh fig (*Ficus carica*) varieties/selections

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Abstract

Consumer acceptance and cost of labor are two barriers to fresh fruit industry development. Fresh fig production has increased recently, making necessary the selection of new varieties with favorable fresh fig quality parameters and longer shelf life. Comparing different fig varieties, maturity stage at harvest had an effect on fruit quality attributes, consumer acceptance, and shelf life. Tree ripe figs had significantly higher consumer acceptance, although shorter shelf life, than figs harvested at commercial maturity. High soluble solids concentration (SSC) and/or high SSC:titratable acidity (TA) ratio were two important parameters in increasing consumer acceptance. Higher fruit firmness and/or lower incidence of juice in the ostiole were two important parameters in extending fig shelf life.

Due to increases in the cost of labor, harvest of the breba crop, having low production and lower quality fruit, may become economically unviable. Fruit not harvested may become potential sites for fungal pathogens and may serve as insect attractants. Spring ethephon applications of 250-1,000 ppm early in period I of breba fruit development were effective at reducing breba crop load. Fall ethephon applications of 500-1,000 ppm also resulted in breba crop load reductions, but with significantly lower efficacy than spring treatments. Ethephon applications resulted in a safe and effective way to reduce breba crop for the fig industry.