

Project 103 Develop New Post-Harvest Decay Control Methods for California Citrus

PI: Joseph Smilanick

USDA ARS Parlier

The groves and packline at Lindcove have provided opportunities to develop and evaluate on a large scale commercially feasible grove and postharvest management options for the citrus industry to minimize postharvest decay losses of fresh citrus fruit. Many significant new practices that have been implemented throughout the industry have been evaluated there, including: 1) the use of heated aqueous fungicides solutions rather than than fungicide use in fruit waxes, which both improved their effectiveness while reducing the amount used and residues in the fruit; 2) pyrimethanil, a new "reduced-risk" class fungicide, thoughly evaluated at Lindcove and now registered and in common use in California; 3) sodium bicarbonate ("baking soda") solutions to both clean fruit and control decay pathogens, and more recently to validate its synergistic action with fungicides, which lead to the revival of the use in California and elsewhere; and 4) near-harvest grove fungicide use to control postharvest decay, particularly during wet years and during degreening, was evaluated over several seasons at Lindcove, and the most effecive material, thiophanate methyl, was identified and is now a candidate for registration in California.