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Use of carnauba based carrier for copper sprays reduces infection by *Xanthomonas citri* subsp. *citri* and *Diaporthe citri* in Florida commercial grapefruit groves

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Author(s)

Jan Narciso, Wilbur Widmer, Christopher Ferenca, Mark Ritenour, Ricardo Diaz

ABSTRACT

Citrus canker, caused by *Xanthomonas citri* subsp. *citri* (Xcc), is a bacterial disease of citrus and results in peel blemishes rendering fresh fruit unsalable. Xcc is most active in warm, wet Florida summers where tissues are infected during periods of active growth. Melanose, caused by *Diaporthe citri*, is common in citrus producing countries, but, like canker, is only important for fresh market fruit. To control canker and melanose, Florida growers spray trees with copper formulations (Cu), but these sprays are removed by strong rains and intense radiation of Florida summers. A study was undertaken in FL commercial grapefruit groves in 2009 and 2010 to assess the efficiency of a spray combining copper with a specially formulated, hydrating wax (WashGard®) (WG). Using a 21-day spray schedule for the season, fruit were sprayed with WG + Cu, Cu and Control (no spray). Fruit from trees sprayed with WG + Cu had approximately 10 and 17% more canker free fruit in 2009 and 2010 respectively compared to trees sprayed with copper alone. Compared to control trees the canker free fruit incidence was increased by ≈10% in 2009 and 57% in 2010. For melanose there was 40% more disease free fruit (treated) over fruit from trees with no treatment in 2009 and approximately 20% more in 2010. Controlling infection with this spray significantly reduces citrus canker and melanose, increasing the percentage of marketable fruit.

KEYWORDS

Citrus Canker; Melanose; Protective Sprays; Adjuvant; Coatings

Cite this paper

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