

Post-harvest control of anthracnose and stem-end rots of Fuerte avocados with prochloraz and other fungicides

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Abstract

Mature unripe Fuerte avocados from Alstonville (northern New South Wales) and Walkamin (northern Queensland) were dipped in fungicides immediately after harvest. In screening tests in which the fungicides were applied for 5 min, prochloraz [1 g active constituent (a.c.)/l] controlled anthracnose (*Glomerella cingulata* var. *minor*), a severe form of stem-end rot caused by *Dothiorella aromatica* and *Botryodiplodia theobromae*, and a mild form of stem-end rot caused by *G. cingulata* var. *minor* and *Stilbella cinnabarina*. Prochloraz increased the percentages of disease-free fruit from 1 to 90% at Alstonville and from 6 to 77% at Walkamin. Percentages of fruit with acceptable disease levels were similarly increased. Other fungicides were less effective in the screening experiments. CGA 6425 1 (0.2 g a.c./l) and carbendazim (1 g a.c./l) controlled both forms of stem-end rot, but not anthracnose. Guazatine (1 g a.c./l) controlled only the mild form of stem-end rot. In a second experiment with avocados from Alstonville, prochloraz was applied at 0.125, 0.25, 0.5, and 1.0 g a.c./l for 0.5, 1, 2 and 4 min. Every treatment except 0.125 g a.c./l for 1 min controlled anthracnose and improved overall disease control. Prochloraz neither caused nor exacerbated several physiological disorders that developed during ripening in these investigations.