

Title Calcium, fungicide sprays and canopy density influence postharvest rots of avocado
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Abstract

A study was carried out in eight orchards in 1999, 2000 and 2001 to examine the effect of preharvest factors on postharvest rots of 'Hass' avocados in New Zealand. A further 14 orchards were sampled in 1999 and, of these, 13 were sampled in 2000, depending on fruit availability. Orchards were selected following consultation with industry personnel to obtain a sample representative of fruit quality in New Zealand. Fruit were harvested in early January at a dry matter content of $\approx 33\%$, then stored and ripened at 20°C. Fruit were assessed for stem-end and body rots when ripe, and fungi from rots were isolated and identified. For the 3 years' data collected from the same eight orchards, the incidence of stem-end rots was linearly related to the number of fungicide applications, mainly of copper and a few of benomyl. In 1999 and 2000, an index describing canopy density and the amount of dead branches in the canopy was significantly related to the incidence of body rots, but not to the incidence of stem-end rots. In 2000, a significant relationship was found between body rot incidence and severity and fruit calcium levels. Body rots were found to decrease with increasing temperature and rainfall in 2000 when these data were collected for seven orchards. In contrast, calcium content in fruit was positively related to these factors. The most common pathogen from isolations was *Botryosphaeria parva*, followed by *Colletotrichum acutatum*. To improve fruit quality of avocados in New Zealand, it is recommended that growers apply fungicides more than eight times and calcium to increase the (calcium+magnesium)/potassium ratio above 0.065 in fruit.

<http://www.springerlink.com/content/0m42133w8r7w70g1/fulltext.pdf>