

Rootstock influences postharvest anthracnose development in 'Hass' avocado

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Abstract

Rootstock studies conducted on 'Hass' avocado found that rootstock had a significant impact on postharvest anthracnose susceptibility. This is the first record of such an effect for avocado. The severity and incidence of anthracnose was significantly lower on 'Hass' grafted to 'Velvick' Guatemalan seedling rootstock compared with the 'Duke 6' Mexican seedling rootstock. Differences in anthracnose susceptibility were related to significant differences in concentrations of antifungal dienes in the leaves and mineral nutrients in the leaves and fruits from trees grafted to different rootstocks. Leaf diene concentrations were up to 1.5 times higher in 'Hass' trees on the 'Velvick' than the 'Duke 6' rootstock. In ungrafted nursery stock trees, diene concentrations were around 3 times higher in 'Velvick' than 'Duke 6' leaves. The 'Velvick'/'Hass' combination also had a significantly lower leaf N concentration, a significantly higher fruit flesh Mn concentration, and significantly lower and higher leaf N/Ca and Ca+Mg/K ratios, respectively. A significant correlation ($r = 0.82$) between anthracnose severity and skin N/Ca ratio was also evident.

Keywords: *Colletotrichum gloeosporioides*, diene, nutrition.

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