

Title Activating mango fruit defence to anthracnose disease
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Citation Australian postharvest horticulture conference, Brisbane, Australia, 1-3 October, 2003; 149-150

Abstract

Resistance of ripe fruit to diseases can be elicited by earlier infection with pathogens or by application of chemical agents. An experiment was carried out to determine the effect of elicitors on defence responses of mango fruits to anthracnose disease caused by *Colletotrichum gloeosporioides* [*Glomerella cingulata*]. Fruits of mango cv. Kensington Pride were treated in the field with the plant activator Bion (100 mg/litre) or the biological elicitor *C. gloeosporioides* (105 spores/ml). Fruits were harvested 7 days later and half were challenged by applying a drop of spore suspension of the anthracnose pathogen to the fruit surface. Disease level (severity and incidence) and fruit physiology (colour and firmness) were assessed daily for up to two weeks at 22-23 deg C. The results indicate that both Bion and *C. gloeosporioides* were able to delay disease progression up to the eating ripe stage. Fewer Bion-treated fruits were infected compared with the control fruits (water-treated), although after reaching the eating ripe stage, disease lesions had appeared on all fruits. Those fruits treated with the *C. gloeosporioides* elicitor, and not subsequently challenged with the pathogen, were more severely covered by disease lesions. There was a suggestion that Bion, in the absence of challenging pathogen, tended to reduce severity. In addition, elicitor treatments did not significantly affect fruit skin colour or firmness changes since all of the fruits reached the eating ripe stage at the same time.