

POSTHARVEST APPLICATION OF DEFENCE ELICITORS TO MANAGAE ANTHRACNOSE IN MANGO FRUIT

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ABSTRACT

The use of defense elicitors; which are agents that stimulate or trigger disease resistance responses in plants have proved to be attractive alternatives to hazardous chemical fungicides in recent years. The present study investigated the possibility of using Salicylic acid and Bion® as postharvest elicitors on mango fruit. Three local mango cultivars were used in the study, ‘Karuthacolomban’, ‘Rata’ and ‘Willard’. Salicylic acid was applied as a postharvest spray at concentrations, 100, 500 or 1000 mg/L and Bion® (Acibenzolar-s-methyl, 500 WG, SYNGENTA) at 25, 50, 100 and 200 mg/L. Disease development following artificial inoculation (10^5 conidia / ml suspension) was assessed. Both elicitors were effective ($P < 0.05$) in controlling postharvest anthracnose. The most effective concentration of SA was 500 mg/L for ‘Rata’, 100 mg/L for ‘Willard’ and both 100 and 500 mg/L for ‘Karuthacolomban’. In Bion® the most effective concentration was 50 ppm for ‘Rata’ and ‘Willard’ and 25 ppm for ‘Karuthacolomban’. In SA treated fruits the percentage reduction in anthracnose ranged from 40- 77 % while values ranged from 67 – 99% for Bion® treated fruits. Results indicate that both SA and Bion® can be used to control postharvest mango fruit loss due to anthracnose.

Keywords: Mango, Anthracnose, Elicitors, Bion®, Salicylic acid

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