

# FOLIAR APPLICATION OF PHOSPHITE DELAYS AND REDUCES THE RATE OF MORTALITY OF THREE *BANKSIA* SPECIES IN COMMUNITIES INFESTED WITH *PHYTOPHTHORA CINNAMOMI* IN

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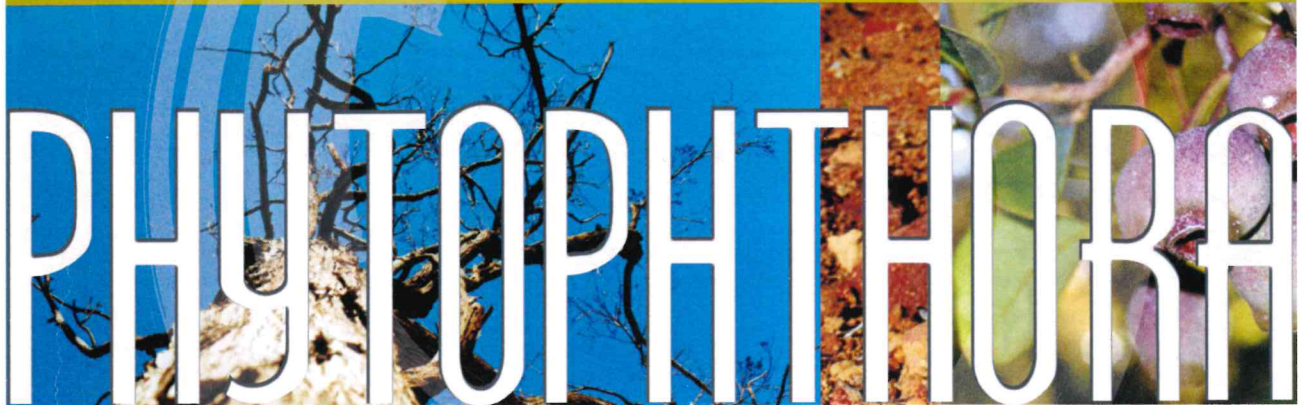
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Our aim in this study was to determine the efficacy of foliar application of phosphite in controlling mortality of three *Banksia* species in *P. cinnamomi* disease centres. Plots, 5 x 5 m, along *P. cinnamomi* disease fronts in *Banksia brownii* Baxter ex R. Brown, *B. baxteri* R. Brown and *B. coccinea* R. Brown communities were sprayed with 2.5, 5 and 10 g L<sup>-1</sup> phosphite and surfactant (0.2% Pulse) using a backpack sprayer. Controls were only sprayed with surfactant. Treatments were replicated four times in a randomised block design. Mortality was monitored in the plots for 4 year in *B. brownii*, by which time the controls reached extinction, and 6 year in *B. baxteri* and *B. coccinea*. For both delay and rate of mortality, differences between phosphite concentration and *Banksia* species were highly significantly ( $P \leq 0.01$ ), but the interaction of phosphite and *Banksia* species was not significant. The non-significant interaction suggest a similar action of phosphite occurred in all three communities. In the sprayed plots, 10 g L<sup>-1</sup> phosphite reduced mortality the greatest, 2.5 g L<sup>-1</sup> the least with, 5 g L<sup>-1</sup> being intermediate between the two. One application of phosphite reduced mortality for up to 2.5 year, after which the plots were resprayed. Unacceptable phytotoxic reactions, such as growth retardation and leaf burning, occurred at concentrations  $\geq 10$  g L<sup>-1</sup>.

060613

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