TIME COURSE STUDIES OF THE EFFECT OF TEMPERATURE AND STIMULATION OF SOIL AT DIFFERENT DEPTHS ON SPORANGIUM PRODUCTION BY *PHYTOPHTHORA CINNAMONI*

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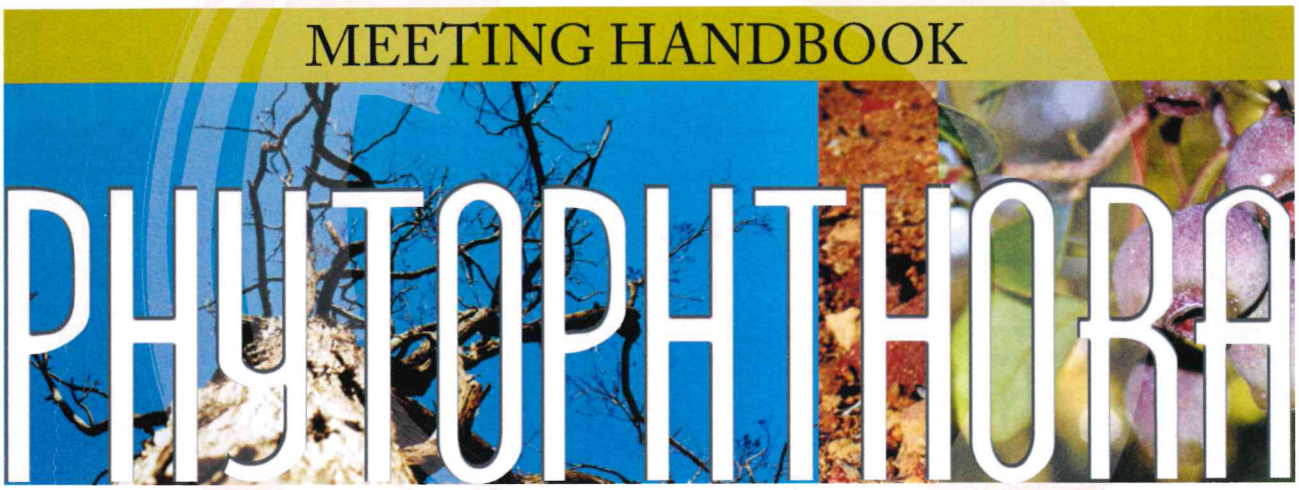
Time course studies of the effect of temperature on sporangium production of *Phytophthora cinnamomi* have not been reported. Little is understood of the soil's capacity to stimulate sporulation at different depths from the surface. Sporangium production was counted on sterilised *Banksia grandis* discs colonised by mycelium of *P. cinnamomi* and incubated in soil extracts on a temperature plate between 10-30 °C. Soil was collected from two sites; only surface soil at one site and soil from the surface and 20, 60 and 90 cm depth from the other site. Extracts were incubated at the different temperatures for 2, 4, 6, 8 and 12 days. Time and temperature were combined in the one equation using the procedure of Pegelow *et al.* (1977). The predicted response surfaces show that numbers of sporangia increase rapidly as temperatures rise from 16-28 °C and incubation periods increase from 2-12 days. There was a more rapid response of sporangium production to temperature in extracts from surface soils than soils collected at depth.

1. Pegelow, E.J. Jr., Taylor, B.B., Horrocks, R.D., Buxton, D.R., Marx, D.B. and Wanjura, D.F. (1977). The gompertz function as a model for cotton hypocotyl elongation. *Agronomy Journal* **69**, 875-878.

MEETING HANDBOOK



PHYTOPHTHORA

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