

PROGRESS IN SELECTION AND PRODUCTION OF JARRAH (*EUCALYPTUS MARGINATA*) RESISTANT TO *PHYTOPHTHORA CINNAMOMI* FOR USE IN REHABILITATION PLANTINGS.

M.J.C. Stukely¹, J.A. McComb², I.J. Colquhoun³ and I.J. Bennett⁴

¹ Department of Conservation and Land Management, CALMSscience Division, 17 Dick Perry Ave, Kensington, WA 6151

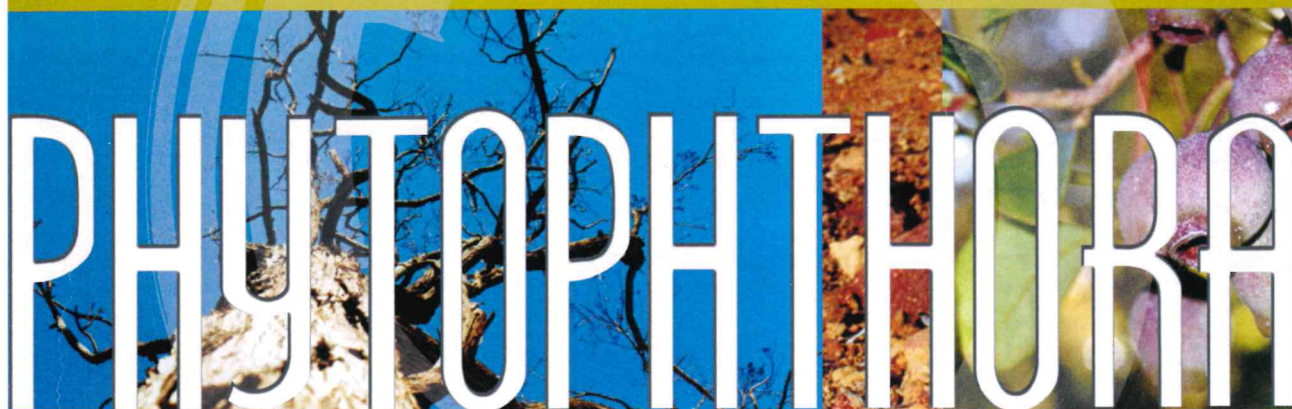
² School of Biological and Environmental Sciences, Murdoch University, Murdoch, WA 6150

³ Alcoa World Alumina Australia, PO Box 252, Applecross, WA 6953

⁴ Department of Applied Science, Edith Cowan University, Mt Lawley, WA 6050

Resistance to *Phytophthora cinnamomi* in jarrah (*Eucalyptus marginata*) is under strong genetic control. It has high heritability and is probably polygenic, and is durable in field trials. Resistant jarrah seedlings derived from healthy mother trees growing on long-term dieback sites were selected from glasshouse inoculation trials and micropropagated by tissue culture. The resulting clonal lines were planted in field validation trials on dieback-affected sites and soil at the base of the plants was inoculated with *P.cinnamomi* to test survival and growth. In spite of some drought deaths, survival of most resistant lines has been high. Some 50 unrelated resistant lines have been selected. However, due to high costs of production and establishment problems in forest sites, it is not feasible to use the clonal jarrah directly in large-scale operational plantings. Clonal seed orchards are now being planted to supply seed of resistant jarrah for use in rehabilitation of bauxite pits, plantings in dieback-affected forest and on cleared agricultural land. Jarrah is being included in trials on groundwater recharge sites on agricultural land where increasing soil salinity is a long-term problem.

MEETING HANDBOOK



in Forests & Natural Ecosystems



2nd International IUFRO Meeting

Esplanade Hotel
Albany, Western Australia
30 September - 5 October 2001

060613

A
632.
444
SEC



060613

Second IUFRO meeting on phytophthora
in forests and natural ecosystems, Perth
and Albany, Western Australia, 30th Sept.
5th Oct, 2001 / book of abstracts

DEPT OF BIODIVERSITY, CONSERVATION & ATTRACTIONS

