

# LONG-TERM SURVIVAL OF *PHYTOPHTHORA CINNAMOMI* IN ORGANIC MATTER UNDER DIFFERENT SOIL MOISTURE CONDITIONS

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It has been suggested that *Phytophthora cinnamomi* does not survive freely in soil for long periods of time under adverse environmental conditions. The pathogen is, however, believed to survive for extended periods under adverse conditions within organic matter. This experiment assessed the long-term survival of *P. cinnamomi* in different types of organic matter buried in two soil types at different moisture conditions.

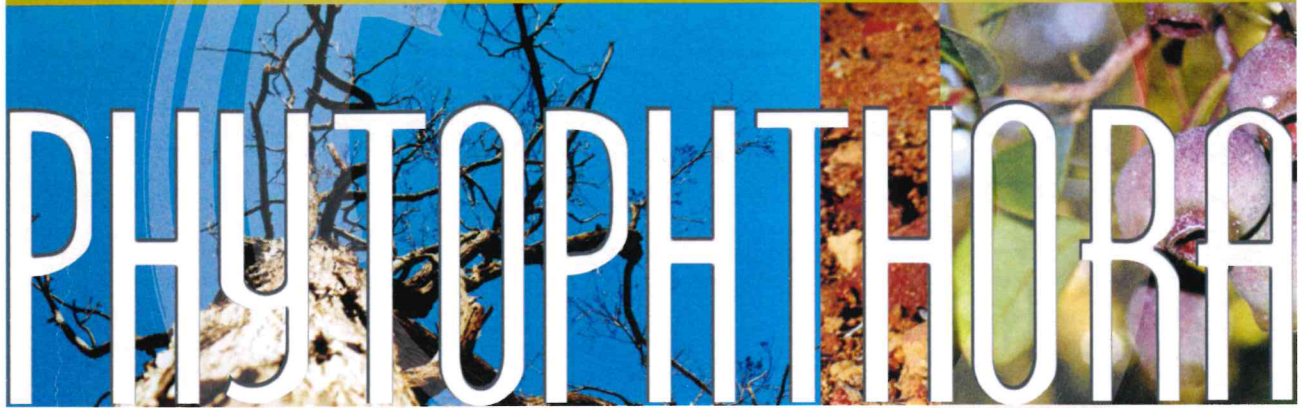
Young *Banksia grandis* stems and young actively growing root tips of *Eucalyptus marginata* (jarrah) were inoculated with *P. cinnamomi*, incubated, and then placed into pots filled with sieved soil collected from either the jarrah forest or an adjacent rehabilitated mine site. The colonised root tips or plugs were buried in each soil type and either *a*) maintained at container capacity, or *b*) allowed to dry-out slowly from container capacity. Treatments were harvested 0, 7, 14, 28, 42, 70, 112, 154 and 210 days after inoculation and assessed for *P. cinnamomi* survival.

*P. cinnamomi* was recovered after 210 days from banksia stems (98% colonisation) and eucalypt root tips (45% colonisation) for both soil types when the soil was maintained at container capacity. However, when the soils were allowed to dry, the pathogen was not recovered after 112 days from either banksia stems or eucalyptus roots.

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