EFFECT OF Phytophthora cinnamomi ON THE WOOD QUALITY OF E. marginata

by F. Batini

Recent discussions with timber merchants indicate that some London buyers are concerned that jarrah timber may be diseased. This obviously refers to jarrah dieback and the associated fungal pathogen P. cinnamomi. It is probably due to the well known fact that SOME fungal species are known to affect the strength and durability of timber either in the tree or in service.

The cell walls of the secondary xylem are composed primarily of celluloses, hemicelluloses and lignin. Lignin is the most enduring of plant tissues and is decomposed only by a comparatively small number of fungal species. These are found chiefly amongst the higher Basidiomycetes and examples such as Polyporus australiensis and Polyporus eucalyptorum are well known to West Australian foresters.

In contrast, lignin decomposition is unknown and cellulose decomposition is uncharacteristic in the Phycomycetes. P. cinnamomi is classified in this rather more primitive group of fungi, whose substrates are limited to the sugars and the simpler carbon compounds. These compounds are found primarily in the regions of high metabolic activity (e.g. the root tips) and in storage tissues (eg. parenchyma). This probably explains why P. cinnamomi has never yet been recovered from jarrah roots greater than ¼ inch in diameter. Wood samples taken from dead, affected and healthy trees have been forwarded to C.S.I.R.O. Forest Products. The results indicate that the radial and tangential cleavage strength of both green and dry samples was not affected.

It is considered most unlikely that P. cinnamomi (per se) could have any deleterious effects on the strength or durability of jarrah timber. Checks and splits will occur in dead trees if salvage is delayed, but this degrade is the result of drying and of subsequent tension stresses.

It is important to discredit any suggestion that jarrah timber is diseased before any permanent damage to the export or local market occurs. It is suggested that A.S.T.M. and the Forests Department should approach C.S.I.R.O. Forest Products with a view to publishing an informative bulletin on this aspect of jarrah dieback.