109. The incidence, extent and origin of columns of naturally occurring decay in young eucalypts.

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Potential final crop, "sawlog", trees from several sites containing 20–30 years-old *Eucalyptus regnans* and *E. delegatensis* regrowth were felled, dissected and assessed for columns of decay originating from natural sources. Overall, 75 per cent of 213 trees sampled had at least one column of decay in the butt log (that part of the stem below 6 metres). However, the incidence of trees with decay varied significantly between sites. The amount of decay in those trees containing columns of decay also showed significant variation between sites. Both the number of individual decay columns (per tree) as well as the size of the individual columns contributed to the site differences. Branch stubs accounted for the origin of 55% of all decay columns with a further 16% originating from branch crotches and 15% from insect activity that was usually associated with branches. Butt rots accounted for only 7% of the decay columns overall although on some plots butt rots accounted for a high proportion of the total decay volume in the butt logs. Although site effects were significant, tree to tree variation accounted for the great majority of the variation in the amount of decay. This indicates that future management to reduce losses to decay will require selection criteria be developed which identify potential final crop trees likely to have high levels of decay. The importance of branches (including branch crotches and branches as foci for wood-boring insects) as infection courts for decay fungi suggests a potential to manage levels of decay by genetically selecting for less "decay prone" branching habits or silviculturally manipulating stands to influence branching habits.

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APPS

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