

# Frost effects in wood anatomy of *Eucalyptus* in southeast Brazil

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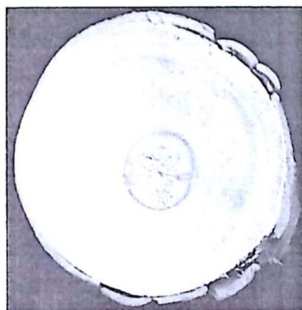
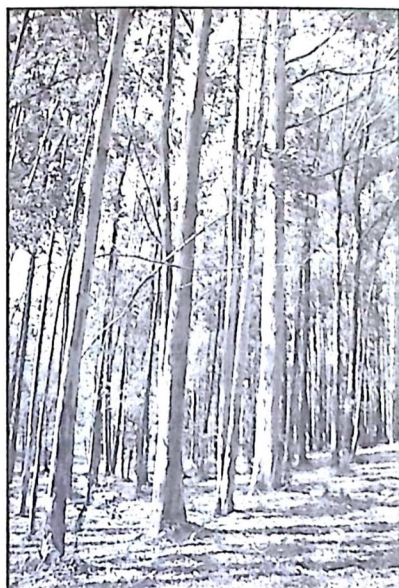
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## INTRODUCTION

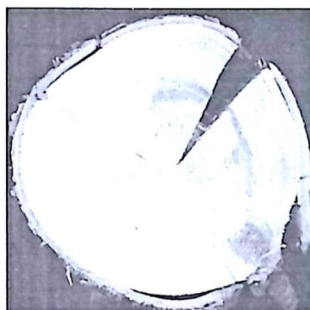
Frost is one of the most limiting factors for *Eucalyptus* plantation in many places of the World. Sometimes trees seem to recover from a frost occurrence, but the wood should be analysed in order to verify if the desirable characteristics were affected.

## RESULTS

The anatomical variation due to frost in the wood of young trees of *Eucalyptus grandis* and *Eucalyptus saligna* from a seven years old stand in São Paulo State was described. This effect can be macroscopically verified by a whole dark ring formation in *E. saligna* and by a half moon like border of the growth ring in the first years of wood formation in *Eucalyptus grandis*.

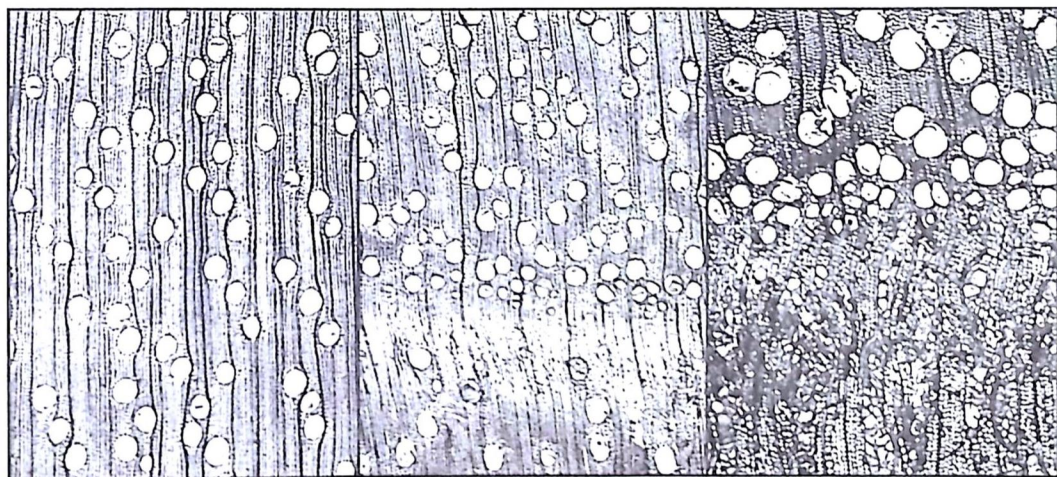


*Eucalyptus saligna*



*Eucalyptus grandis*

Microscopically it was noticed some anatomical irregularities such as formation of a frost ring, recognized by cellular disorder of parenchyma cells, mainly radial parenchyma tissues, pith flecks and tyloses formation, as well as pores frequency and diameter variation and presence of gelatinous fibers.



*Eucalyptus* wood regular aspects

*Eucalyptus saligna*

*Eucalyptus grandis*