

SPECIAL COLLECTION

FACULTY OF APPLIED SCIENCE

DEPARTMENT OF FOREST RESOURCES AND WILDLIFE MANAGEMENT



Effects of a wildfire on a *Euclayptus microtheca* stand at Chesa Forest Research Station (Forestry Commission) in Bulawayo.

By

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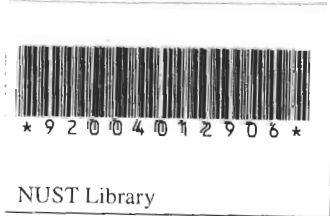
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ABSTRACT

A study was carried out at the Chesa Forest Research Station in Bulawayo at the end of April 2006 to increase knowledge on the effects of wildfires on a *Eucalyptus microtheca* plantation. The survey was aimed at assessing whether survival of individual trees within a stand after the occurrence of a wildfire depends on growth parameters (that is diameter at breast height, tree height, crown height and crown length). The wildfire burnt through the stand in October 2005. This study was carried out with the purpose of coming up with options for salvage harvesting after the occurrence of a wildfire. With the increase in wildfires in Zimbabwe from 2003 (and 2005 being the worst fire season experienced since the establishment of the Timber Producer's Federation in 1967), it is important for foresters to be able to quantify which trees will survive a wildfire and which trees need to be harvested immediately after the occurrence of a wildfire. The results indicated that survival of individual tree depended on diameter at breast height and height of the tree crown. Since the heights of plantation trees are relatively similar, the trees are equally susceptible to fire caused mortality. Crown length was found to have no influence on tree survival. Wildfires therefore have negative impacts on tree survival, but it is important to note that those with large basal diameters, heights and in essence crown heights can be left infield to grow to the prescribed maturity age. Further studies should be carried out to determine how degrees of fire scorch caused by a wildfire might influence coppice reproduction and regeneration potential.

→ Crown length vs tree survival?