



Ocotea puberula fire behavior for potential use in safety curtains in preventing forest fires

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ABSTRACT – The safety curtain is a silvicultural technique for the prevention of forest fires, which aims to prevent and/or reduce the spread of fire, consisting of a planting of species less flammable than the main cultivation. This study aimed to evaluate the behavior of the fire of *Ocotea puberula* (Canela Guaicá) to indicate its use in safety curtains, using *Pinus taeda* L. as a control (species considered flammable). The entire experiment was carried out in a combustion chamber at the Forest Fire Laboratory of the Federal University of Paraná, in Curitiba, Brazil. For the experimental burns in the combustion chamber, fine plant material (< 0.7 cm) removed from the treetops was used, which remained 48 hours in greenhouse (75° C). For each species, four replicates were performed with plots of 1 m² with fuel material load of 1 kg.m⁻². The factors were analyzed: moisture content of the material (%), fire propagation velocity (m.s⁻¹), flame height (m) and fire intensity (kcal.m¹.s⁻¹). These data were submitted to statistical analysis (ANOVA) and Tukey test, through software R. All variables of fire behavior showed a significant difference between the tested species. The means of propagation velocity, flame height and fire intensity differed between the two species, and *P. taeda* presented higher values than *O. puberula* for the tested variables, indicating that the tested species is less flammable than the control species, and this species presents potential characteristics for use as safety curtains, requiring complementary tests to prove the efficiency of this species to compose safety curtains.

Keywords: preventive forestry, forest fire.