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EFFECT OF SYDNEY BLUE GUM (*Eucalyptus saligna* Sm - MYRTACEAE) LEAF LITTER ON GRASSLAND SPECIES

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Plant secondary metabolites can negatively affect the development of other plants around them. The study of this phenomenon is called allelopathy. Commercial plantations of *Eucalyptus* spp have been identified as a threat to the natural grassland vegetation in southern Brazil. Previous studies indicate that the essential oil and the aqueous extract of *E. saligna*'s leaves are phytotoxic to graminoid and leguminous species. This study aimed to elucidate whether the effects of *E. saligna* leaf litter on syntopic species are related to chemical or physical factors. The recipient plants were *Paspalum notatum* Fluggé (Poaceae) and *Lotus corniculatus* L. (Fabaceae), both of which could occur under eucalypt plantations in the grasslands. Soil was collected from eucalypt plantations in Guaíba, RS, and placed in pots. In each pot 30 seeds of *L. corniculatus* or *P. notatum* were sown. There were four treatments, with four replicates each. (1) Eucalypt leaf litter from the same plantations covering the soil, to assess chemical and physical effects on seedlings. (2) Artificial leaves (made of E.V.A.) on soil, to simulate only physical effects. (3) Dark paper on pots, for assessing shading effects only. (4) The control, which had no interference. Effects on mortality, fresh biomass and shoot length were analyzed. In *L. corniculatus*, after two weeks, the plants were completely estiolated in all treatments except for the control. After one month, total mortality was observed in all treatments except for the control. *Paspalum notatum*, exhibited lower fresh biomass after one month of experiments in all treatments, compared to the control. The results indicate that the physical effects of litter affect the establishment of herbaceous plants in eucalypt plantations, and that allelopathy probably has no influence in the field. PROBIC.