

Level of economic damage for leaf-cutting ants (Hymenoptera : Formicidae) in Eucalyptus plantations in Brazil

Zanetti R, Zanuncio JC, Vilela EF, Leite HG, Jaffe K, Oliveira AC

SOCIOBIOLOGY

42 (2): 433-442 2003

Abstract:

The objective of this research was to estimate level of economic damage for leaf-cutting ants (Hymenoptera: Formicidae) in Eucalyptus plantations, because it represents an important tool for integrated management of these pests. Data from the continue forest inventory of Eucalyptus plantation of the V & M Florestal, in the Municipality of Jo (a) over tildeo Pinheiro, State of Minas Gerais, Brazil from 1991 to 1996 were correlated with those of control costs of monitoring leaf-cutting ants in this area and period. Data of each stand of Eucalyptus were arranged in spreadsheets and statistically analyzed. Reduction in wood production per unitary increment of number of leaf-cutting ant nests per hectare was 0.87% for all Eucalyptus species; 0.68% for Eucalyptus camaldutensis; 3.26% for Eucalyptus citriodora; and 1.78% for Eucalyptus tereticornis. Wood production in stands of Eucalyptus cloeziana and Eucalyptus urophylla were not affected by density of nests of leaf-cutting ants present in the area studied. On the other hand, leaf-cutting ants negatively affected wood production in stands of other Eucalyptus species.

Addresses:

Zanetti R, Univ Fed Lavras, Dept Entomol, BR-37200000 Lavras, MG, Brazil

Univ Fed Lavras, Dept Entomol, BR-37200000 Lavras, MG, Brazil

Univ Fed Vicosa, Dept Anim Biol, BR-36571000 Vicosa, MG, Brazil

Univ Fed Vicosa, Dept Engn Florestal, BR-36571000 Vicosa, MG, Brazil

Univ Simon Bolivar, Caracas 1080A, Venezuela

V&M Florestal Ltd, BR-35790000 Curvelo, MG, Brazil