

Soil faunal activity in natural and improved secondary vegetation (*capoeira*) and in cropped fields under different land preparation systems

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The influence of different cropping systems on the density and abundance of soil fauna and soil physical characteristics under improved fallow vegetation with fast growing leguminous trees and under substitution of fire by mulching was studied. The enrichment experiment is located in Igarapé-Açu, State of Pará, in small farmer's land where the following trees species were under observation: *Acacia mangium*, *Inga edulis*, *Sclerolobium paniculatum* (the trees were planted at a spacing of 1 m x 2 m) and one 6-year-old fallow without enrichment. First results already show that in the enriched fallows with *I. edulis* 15 soil faunal groups were observed, 14 groups in the *A. mangium*, 12 groups in *S. paniculatum* and 15 groups in the 6-year-old fallow. In the enrichment with *I. edulis* the biggest density (168.111 ind/m²) was observed, declining in the following sequence: 6-year-old fallow 136.636 ind/m², *A. mangium* with 133.260 ind/m², *S. paniculatum* (116.415 ind/m²). The analysis of the different environments indicated a dominance by Acari in all four habitats studied (76, 6%). Collembola is the second strongest group, with a density of 14,1%.

Furthermore this work looks at possibilities to increase the population of species with key functions on decomposition processes such as Diplopoda and on soil physical properties Oligochaeta.

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