

[MO\_SBM\_P57]

## Soil and litter invertebrates in agroforestry systems and regenerating Atlantic Forest

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Only approximately 7-13% of the Brazilian Atlantic Rainforest remains intact and highly dispersed in many fragments, primarily in the states of São Paulo and Paraná. However, many fragments are actually forests in different stages of regeneration, where biodiversity may be recovering slowly after selective harvesting or other forms of exploitation. Multi-strata agroforestry (AF) systems, including annual and perennial crops, have lower impacts on biodiversity compared with more intensive land use systems such as monocultures, and can be used as buffers to promote biodiversity conservation in landscape mosaics with natural forests and agricultural ecosystems. In the present study, we aimed to assess soil and litter invertebrate diversity in 5 and 10 yr old agroforestry systems, compared with regenerating (10 yr old) Atlantic forest in the region of Barra do Turvo and Adrianópolis, in the states of São Paulo and Paraná, respectively. Three 10x10 m plots were selected within each system, and four pitfall traps were installed in each plot, totaling 12 traps per system. The pitfalls remained in the field for 1 week in the rainy season of 2011 (December). Each system had three replicates (for a total of 108 traps), but only partial results are presented in this abstract (all results will be in poster), as the individuals are still being identified. Total number of individuals collected, group diversity and various diversity indices were calculated. Up to now, 10,756 individuals were found belonging to 23 invertebrate groups. Collembola, Acari, Formicidae and Coleoptera were the main groups encountered, representing combined approx. 90% of all individuals in each system. With the present data, significant differences between treatments were only observed for Shannon diversity index and Equitability (Pielou) that were higher in the regenerating forest than in the 10 yr AF system, but not significantly different than the 5 yr AF system. Therefore, Shannon diversity and equitability decrease in older AF systems, although richness and other diversity parameters are not altered. However, confirmation (or not) of these conclusions will only be possible after analysis of all data (to be presented in the poster).