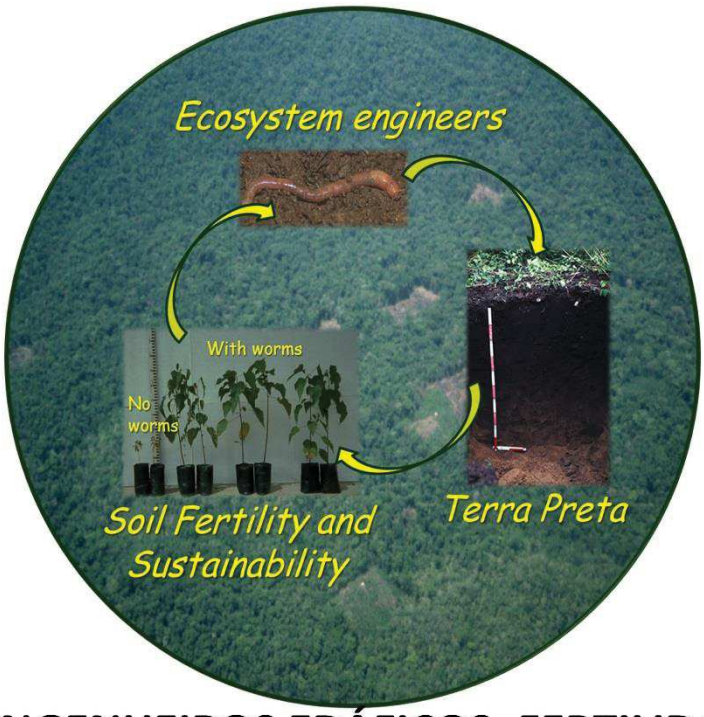
PROMOÇÃO E ORGANIZAÇÃO:

5º ENCONTRO LATINO-AMERICANO DE ECOLOGIA E TAXONOMIA DE OLIGOQUETAS

ELAETAO

08 e 09 de junho de 2015



SIMPÓSIO ENGENHEIROS EDÁFICOS, FERTILIDADE DO SOLO E TERRA PRETA DE ÍNDIO (TPI)

10 e 11 de junho de 2015

APOIO:

Evaluation of Soil Quality in Different Land-Use Systems of South Brazil

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ABSTRACT - Since the degradation of ecosystems is associated with an important loss of soil biodiversity, there is an urgent need for soil quality evaluation in order to identify and develop more sustainable practices. A General Indicator of Soil Quality (GISQ) has been proposed by Velasquez et al. (2007) which combines a set of subindicators. These subindicators may also be considered as indicators of the performance of different ecosystem services (ES) such as soil structure and nutrient cycling. This study aimed to evaluate the impact of different land-use systems on soil quality in a Natural Reserve of South Brazil, in Lapa-Paraná. Variables associated with soil macrofauna diversity, fertility, physical properties and aggregate morphology were measured for each system. The highest GISQ average value was calculated for the Forest (0.80), while this system also had the highest values for macrofauna, chemical and physical subindicators. PCA analysis showed a significant separation ($p<0.001$) of the Soybean crop from the others systems based on the lowest subindicators values. The GISQ reflected the provision of soil ES, showing that better soil quality produces more ES. The methodology used can be applied extensively and allows monitoring of land-use changes through time. It could therefore guide the implementation of soil restoration technologies.