



Describing vertical paths of carbon stable isotopes for soils of Costa Rica

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Carbon isotopes ratios in soils can provide valuable information when trying to understand soil organic matter dynamics in depth and in time. Belowground carbon processes appear to be of paramount importance in the study of the global carbon cycle and climate change issues and yet much more is known about aboveground systems.

In this contribution data are reported for 14 profiles under different land uses (forest, grassland, coffee and sugar cane) for a maximum depth of one meter. The main purpose of this study is to determine and compare vertical variability of $\delta^{13}\text{C}$ abundance in soils under different land uses and also to compare soil $\delta^{13}\text{C}$ vertical variability to soil carbon vertical variability concentrations. The sampling sites are located in southeastern Costa Rica at one flank of Turrialba volcano. Soils belong to Inceptisols derived from volcanic intrusive rocks, lava flows and ash deposits going from the Quaternary to the Tertiary period and Ultisols derived from sedimentary rocks from the Cretaceous to the Pliocene.