Abstract

In tropical forests with nutrient-rich soil trees nutrient resorption from senesced leaves has not always been observed to be low. Perhaps this lack of consistence is partly owing to the nutrient resorption methods used. The aim of the study was to analyse N and P resorption proficiency from tropical rain forest trees in a nutrient-rich soil. It was hypothesised that trees would exhibit low nutrient resorption in a nutrient-rich soil. The soil concentrations of total N and extractable P, among other physical and chemical characteristics, were analysed in 30 samples in the soil surface (10 cm) of three undisturbed forest plots at Estación de Biología Los Tuxtlas on the east coast of Mexico (18°34′ - 18°36′ N, 95°04′ - 95°09′ W). N and P resorption proficiency were determined from senescing leaves in 11 dominant tree species. Nitrogen was analysed by microkjeldahl digestion with sulphuric acid and distilled with boric acid, and phosphorus was analysed by digestion with nitric acid and perchloric acid. Soil was rich in total N (0.50%, n = 30) and extractable P (4.11 µg g⁻¹, n = 30). As expected, trees showed incomplete N (1.13%, n = 11) and P (0.11%, n = 11) resorption. With a more accurate method of nutrient resorption assessment, it is possible to prove that a forest community with a nutrient-rich soil can have low levels of N and P resorption. Rev. Biol. Trop. 53(3-4): 353-359. Epub 2005 Oct 3.

Keywords

Los Tuxtlas, lowland forest, Mexico, resorption proficiency, senescent leaves.