

<b>Luce</b>	<b>B04</b>	Nutrient input and decomposition in high and low quality lowland secondary tropical rain forests
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Nutrient cycling is crucial to the effective functions of tropical forest ecosystems but the effect of forest degradation on litter fall as a major component of nutrient cycling is not well understood. The objectives of this study were 1) to determine the amount (fresh and dry mass) of litter fall in low and high secondary forests in the HRF, to 2) determine the total nutrient content of litter fall and the proportion returning to soil through decomposition, and to 3) determine the rate of decomposition of litter fall in each forest type. This research is expected to produce a detailed comparison of nutrient cycling in high secondary and low secondary forests, and reveal how these processes relate to nutrient input to the soil.

The result of this study show that the elements C, N and P accumulated in the top soil of both high and low secondary forest, while the base cations leached and accumulated in the lower strata. It was found that litter fall input was important to determine the magnitude of nutrient input to the soil. The nutrient input (after 9 month decomposition) was 0.16 % higher in high secondary forest than in low secondary forest. The litter production was higher in high secondary forest, while the litter nutrient contents in high secondary forest were similar to the low secondary forest. The decomposition was faster in low secondary forest compared to high secondary forest but the nutrient input after 9 month decomposition was higher in high secondary forest.