

Litterfall and mineral nutrient content of litter in dry dipterocarps forest.

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ABSTRACT

The investigation was carried out at the Dry Dipterocarp forest of Sakaerat Experiment Station, Nakornratchasima. Litter was collected at the end of each month, from 12 trays (each 1 m.² in size), placed at random in one hectare permanent plot. Observations covered the period from March 1975 to February 1976. The biomass of undergrowth (*Arundinaria pusilla* A. Chev. & A. Cam.) was collected from four 1x1 m. quadrant every month. To estimate the decomposition rate of leaf litter, the mature leaves of known weight of *Pentacme suavis* A.DC. and *Shorea taluta* Roxb. were tagged and laid down randomly on the forest floor. At the end of each month, the tagged leaves were randomly selected for measurement of their weight. The loss of leaf weight is assumed to be the decomposition rate. The mean concentrations of the various nutrients in litter were determined by chemical analysis.

The study showed that the annual litter production was found to be 4.664 tons/ha. Leaf litter alone accounted for about 73.69 %. The biomass of undergrowth was about 1.343 tons/ha. The ground cover of *Arundinaria pusilla* A. Chav. & A. Cam. Was burned annually by local people. From total litter and undergrowth production, the various nutrient elements returned annually to soil were 64.20 kg/ha. of nitrogen, 3.98 kg/ha. of phosphorus, 36.98 kg/ha. of potassium, 48.80 kg/ha. of calcium and 12.74 kg/ha. of magnesium. The decomposition rates of *Shorea talura* Roxb. leaves were slower than those of *Pentacme suavis* A.DC.