

Nitrogen mineralization of *Hevea* leaf litter in rubber growing soils

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Nitrogen in *Hevea* leaf litter could play a significant role in *Hevea* nutrition. Therefore, an experiment was conducted to study the N mineralization of *Hevea* leaf litter in three different rubber growing soils. The N pool size and the pattern and rate of N release from *Hevea* leaf litter were determined. Nitrogen pool size in the leaf litter of two clones, RRISL 203 and RRIC 121, was estimated. A laboratory incubation study was conducted using cores filled with soils from Kegalle, Agalawatta and Monaragala regions with and without *Hevea* leaf litter. Cores were filled to a bulk density of 1.3 Mg m^{-3} and the moisture content was maintained at 60 % water holding capacity. The $\text{NH}_4^+\text{-N}$ and $\text{NO}_3^-\text{-N}$ contents were determined at 2, 4, 8, and 12 weeks after incubation. There was a significant difference in the size of the N pool in *Hevea* leaf litter in two clones and they were 13.5 and $25.7 \text{ kg N ha}^{-1}$, for the RRIC 121 and RRISL 203, respectively. Nitrogen mineralization was significantly affected by residue and the soil type. Nitrogen released from the residue added soils was significantly higher ($p < 0.05$) than that of no residue added soils. Nitrogen mineralization was significantly higher ($p < 0.05$) in Kegalle soils than in other two soils. However, N mineralization from residues appears not to be dependant on the soil type and about $9.0 \text{ mg of N kg}^{-1}$ had been released, on average, during the incubation period.