



RESEARCH PAPER

Litter decomposition and properties of soil under *Dalbergia sissoo*, *Acacia mangium* and *Eucalyptus tereticornis*

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Abstract : The quantity of litter fall on the forest floor is quite high and they have a significant contribution to the dynamics of forest ecosystem. The present investigation was undertaken for litter quantification and its decomposition as per litterfall type, canopy also characteristics of soil in sole and mixed stands of *Acacia mangium*, *Eucalyptus tereticornis* and *Dalbergia sissoo* in agroforestry system. Quantification of litterfall and nutrient analysis was carried out for three trees i.e., *Acacia mangium*, *Eucalyptus tereticornis* and *Dalbergia sissoo* in agroforestry system. In the research area, *sissoo* stand has higher litterfall than *mangium* and *Eucalyptus*, being maximum litterfall occur in the month of January. The mean values for litterfall were 4000, 2200 and 1800 kg ha⁻¹ year⁻¹ for *sissoo*, *mangium* and *eucalyptus* stands, respectively. Annual decay constant was minimum for *eucalyptus* (k=0.161) whereas in *sissoo* it was (k=0.276), indicating the variability in nitrogen content among the types of litter (*Sissoo*, 2.25% and for *Eucalyptus* its 1.72%). In conclusion it is stated that N rich litter may speed up for decomposition process.

Key Words : Soil health card, Fertilizer consumption, Yield of paddy

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