

B-58: Decomposition and nitrogen release pattern of leaf litter of some agroforestry species

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The time course of decomposition and the nitrogen release pattern of leaf litter of 3 common agroforestry species, namely *Gliricidia sepium*, *Artocarpus altilis*, and *Mangifera indica* were studied by litter bag technique. at Mapalana, Kamburupitiya. Paddy straw was used as a reference.

Gliricidia sepium had the highest initial nitrogen content (1.92%), followed by *Artocarpus altilis* (0.97%) paddy straw (0.53%) and *Mangifera indica* (0.39%). Considerable interspecific variations were observed in the time course of decomposition and N release pattern. *Gliricidia sepium* lost 50% of its mass and initial nitrogen content by 2 weeks of decomposition. The corresponding figures for *Artocarpus altilis*, *Mangifera indica* and paddy straw were 39.0, 18.0 and 22.8% respectively. The time taken for 50% mass loss in *Artocarpus altilis*, *Mangifera indica*, and paddy straw was 4, 14 and 5 weeks respectively. A salient feature of *Mangifera indica* was that it immobilized N to the degree of 17.8% during the first 2 weeks of decomposition and lost only 47% of initial N content even by 16 weeks of decomposition.