

Microbial enzyme activities related to litter decomposition near a highway in a sub-tropical forest of North East India

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Abstract

Cellulose, amylase and invertase activities were studied in extracts of leaf litters of *Alnus nepalensis* and *Pinus kesiyia* during litter decomposition at a roadside (more polluted) and a non-roadside (less polluted) forest stand. Enzyme activities were considerably higher in litter at the less polluted than at the more polluted site. Cellulase and amylase activities showed a marked seasonal variation at both sites. Cellulase and amylase activities increased during litter decomposition, whereas invertase activity was higher at the beginning of litter decomposition. Invertase activity correlated positively with litter soluble sugars. Cellulase and amylase activities, but not invertase activity, were correlated significantly with numbers of fungi and bacteria.