

37. Volume and decay data as a tool for tropical forest inventory and management

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A volume and decay study was carried out in the Iwokrama Forest, Central Guyana. The objective was to attain information on volume and decay in commercial trees, their relationship to specific external decay indicators, and their effect on utilization factors and merchantable wood volumes. The study involved the analysis of 155 trees. Classical interrelations between volumes and other parameters were examined, decay losses were measured and registered, their effect on wood utilization was defined and observable decay indicators were registered. The analysis of these attributes has improved the capacity for estimating merchantable tree volumes in inventories in the Iwokrama Forest, and has defined relationships between those volumes and decay losses and between these factors and observable decay indicators. Nine types of decay indicators were analyzed in the study. Significant interrelations were found between utilization factor and number of types of decay indicators in the tree. The application of the results to forest inventories increases the precision of volume estimations, reduces inventory efforts, increases the knowledge base for selecting harvestable trees and helps to identify decayed trees to ensure they are left standing, thus contributing to biodiversity conservation.

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