MODELING NATURAL MORTALITY RULES OF TREE SPECIES IN DIPTEROCARP FORESTS IN DAK LAK PROVINCE

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Summary

Modeling of the natural mortality process of forest trees is a research field that has not been fully implemented in Viet Nam, especially for natural forests in general and Dipterocarp forests in particular. This study aims to develop a model estimating the probability of natural mortality of trees species in Dipterocarp forests in Dak Lak province. The data were collected from 33 permanent plots established in Dipterocarp forests, repeatedly measured twice in a 5-year period. The model estimated the probability of natural mortality trees from 6 cm of diameter and above which were divided into three species groups based on biological characteristics. The logistic function was used in this study and provided good results with the coefficients of determination for three species groups: 0.69, 0.64 and 0.46, respectively. Factors strongly correlated with the probability of the mortality tree included: diameter at breast height, total stand basal area, basal area of lager trees and site quality. The mortality model is one of the major components of the growth and yield model that contributes to improve the accuracy of forecasting forest growth and development process.

Keywords: Dipterocarp forests, natural mortality model, modeling, tree mortality.