

# THE GROWTH OF WHITE BAMBOO (*Dendrocalamus membranaceus* Munro) IN RELATION TO TOPOGRAPHIC POSITION AND MANAGEMENT INTENSITY

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## Summary

Topographical position and management intensity may influence white bamboo growth. The hypotheses were tested that white bamboo planted on foothill grows better than white bamboo planted on hilltops, that different management intensities have various effects on bamboo growth, and that there is a difference in light use efficiency of white bamboo on different topographical position and management intensity. The growth indicators were collected in 29 plots in three areas (Cau Hai-Phu Tho, Ngoc Lac-Thanh Hoa, and Luong Son-Hoa Binh) were used in testing the hypotheses. Topographic position had strong effects on white bamboo growth in Cau Hai-Phu Tho and Ngoc Lac-Thanh Hoa but not in Luong Son- Hoa Binh. The values of total culm volume, DBH, culm height and the number of economically valuable culms of white bamboo planted on foothill always higher than that of white bamboo planted on hilltop. Management intensity had significant effect on total culm volume, on culm wall volume and on dry culm mass in Cau Hai-Phu Tho, and in DBH and height in Luong Son-Hoa Binh. In all three areas white bamboo in pure intensive management always had greatest growth features. Topographic position had significant effect on culm volume light use efficiency in Cau Hai-Phu Tho, culm DBH and height light use efficiencies in Ngoc Lac-Thanh Hoa, and number of economically valuable culm light use efficiency in both Cau Hai-Phu Tho and Ngoc Lac-Thanh Hoa. Management intensity had significant effect on light use efficiency of white bamboo planted in Cau Hai-Phu Tho and Luong Son-Hoa Binh..

**Keywords:** *White bamboo, topographic position, foothill, hilltop, management intensity, light use efficiency.*