

Wood characteristics of plantation growth *Ceiba pentandra* from „terra firme“ and „várzea“ sites

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This study was carried out with tree specimens of sumauma tree (*Ceiba pentandra*). Native adult and young planted trees of floodplains (várzeas) and uplands (terra firme) were investigated

The objective of this research was to bring out information on the species' growth patterns and to correlate those information both with the different environmental conditions (várzea and terra firme), and with the wood quality of adult native trees. The *Ceiba pentandra* tree height can be above 60 m, and DBH higher than 2.4 m, though mean height is between 40 and 50 m, and mean DBH, 130 to 180 cm. Primarily used for veneer and plywood manufacturing, sumauma is of high market value.

The samples, were taken from pith to bark, from a cross-section disk at DBH for the study of wood characteristics variations: wood density, anisotropy, and anatomic wood elements frequency.

Wood density increases from pith to bark, for both native and planted trees. The contraction anisotropy coefficient value indicated that sumauma is highly dimensionally unstable, showing use limitations such as constructions. The influence of ecosystems over the anatomic wood elements was not clear. Plantation trees showed higher values for estimated and measured wood density than the measured values of the native trees. These findings may limit the future use of plantation trees for plywood, the main use of this light wood species with high vessels percentages, and good workability. These characteristics favors plywood manufacturing with reduced costs.