Anatomical and physical properties of cultivated two- and four-year-old bambusa vulgaris

Abstract

Cultivated Bambusa vulgaris of two and four-year old were harvested and studied for their anatomy and physical properties. The anatomy properties between the two age-group of bamboo were observed to have some degrees of variation. This showed that the bamboo anatomy structure has strong correlation with age. The frequency of vascular bundles was greater at the bottom and top portion than in the middle portion of both age-groups. There was no difference in vessel diameter between the two and four-year old culms at the middle of the culms wall thickness. The cell's wall thickness of both parenchyma and fibre were greater in the 4 year-old than in the 2 year-old culms. In the physical aspect, basic density was found to be higher in the 4 year-old culms than in the 2 year-old by 5 to 8%, and increases from lower to upper internodes showing that there is a maturing process going on between the two age-group relative to the tissue type that they possess.