

**Physical characteristics and anatomical properties of cultivated bamboo  
(*Bambusa vulgaris* Schrad.) culms**

**Abstract**

Two age-groups (2 and 4 years old culms) of cultivated *Bambusa vulgaris* Schrad. were harvested and investigated for their physical characteristics and anatomical properties. The physical characteristics did not show significant differences between both the 2 and 4 year-old bamboo. However, variation in anatomical properties was observed between the two age-group bamboos. The anatomical structure in bamboo has a very strong correlation with the age, location where the samples were taken, moisture content and the basic density. The basic density is 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 maturation process going on between the two age-groups relative to the two of tissue types. The frequency of vascular bundles is 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 2 and 4 year-old culms at the middle of the culms wall thickness. The cell wall thickness of both parenchyma and fibre were greater in the 4 year-old than in the 2 year-old culms. © 2009 Asian Network for Scientific Information.