

RESEARCH ARTICLE :

Pulping and strength properties of Bamboo genetic resources at various age gradations

■ **R. THIRUNIRAI SELVAN, K.T. PARTHIBAN AND B. PALANIKUMARAN**

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SUMMARY : Seven bamboo species viz., *Bambusa bambos*, *Dendrocalamus strictus*, *Bambusa vulgaris* var. *vulgaris*, *Bambusa vulgaris* var. *striata*, *Bambusa balcooa*, *Bambusa tulda*, *Bambusa polymorpha* with five age gradations were taken for the study. The pulping and strength properties were analysed for Bamboo genetic resources with all age gradations. With regards to pulping properties, five-year-old *Bambusa balcooa* has recorded higher pulp content (50.06 %) with optimal kappa number (18.50). The strength properties of five age gradations revealed that the superiority of five-year-old *Bambusa balcooa* in terms of tensile index (78.34 NM g⁻¹), burst index (24.87 mNm² g⁻¹) and tear index (7.54 KPa m² g⁻¹) of unbleached pulp. Considering all the parameters into account, the five-year-old *Bambusa balcooa* species proved superior in terms of pulp yield, kappa number and strength properties and hence this study recommends five-year rotation for pulpwood plantation of *Bambusa balcooa*.

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Author for correspondence :

R. THIRUNIRAI SELVAN
Forest College and
Research Institute,
Tamil Nadu Agricultural
University,
METTUPALAYAM (T.N.)
INDIA
Email : selvanforester
@gmail.com

See end of the article for
authors' affiliations