

**PENGARUH PERBEDAAN UMUR DAN KEDUDUKAN AKSIAL  
TERHADAP VARIASI SIFAT FISIKA DAN ANATOMI BAMBU  
WULUNG (*Gigantochloa atroviolacea*)**

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**INTISARI**

Bambu wulung merupakan salah satu komoditas Hasil Hutan Bukan Kayu (HHBK) yang dimanfaatkan oleh masyarakat Indonesia. Penelitian ini dilakukan untuk mengetahui pengaruh perbedaan umur dan kedudukan aksial terhadap variasi anatomi dan sifat fisika bambu wulung sehingga dapat mendukung pemanfaatan bambu wulung yang lebih baik. Rancangan penelitian yang digunakan adalah Rancangan Acak Lengkap (RAL) dengan parameter yang diuji meliputi sifat fisika, dimensi serat serta nilai turunannya, dan proporsi sel.

Hasil penelitian menunjukkan bahwa bambu wulung memiliki rata-rata kadar air segar dan kadar air kering udara berturut-turut sebesar 191,80% dan 15,03%. Hasil rata-rata berat jenis segar, berat jenis kering udara, dan berat jenis kering tanur berturut-turut sebesar 0,36; 0,57; 0,52. Hasil rata-rata penyusutan dari kondisi segar ke kering udara pada arah tebal, lebar, dan panjang (longitudinal) berturut-turut sebesar 18,22%; 10,98%; 0,48%. Hasil rata-rata panjang serat, diameter serat, diameter lumen, dan tebal dinding sel berturut-turut sebesar 2,39 mm; 18,42  $\mu\text{m}$ ; 13,16  $\mu\text{m}$ ; 2,63  $\mu\text{m}$ . Hasil rata-rata proporsi serat, parenkim, pembuluh, sklerenkim, floem, dan ruang antar sel berturut-turut sebesar 35,07%, 38,14%, 6,32%, 16,06%, 3,16%, 1,26%.

Berdasarkan penelitian yang telah dilakukan terhadap parameter-parameter yang diamati dapat diambil kesimpulan bahwa faktor tingkatan umur berpengaruh terhadap keragaman sifat fisika, diameter serat, tebal dinding serat, dan proporsi ruang antar sel sementara kedudukan aksial berpengaruh terhadap keragaman sifat fisika proporsi pembuluh, proporsi sklerenkim, proporsi floem, dan tidak berpengaruh terhadap variasi dimensi serat.

**Kata Kunci:** Berat Jenis, Dimensi Serat, HHBK, Proporsi Sel, Turunan Dimensi Serat

## THE INFLUENCE OF AGE AND AXIAL POSITION DIFFERENCES ON VARIATIONS OF PHYSICAL AND ANATOMICAL PROPERTIES OF WULUNG BAMBOO (*Gigantochloa atroviolacea*)

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### ABSTRACT

Wulung bamboo is one of the Non-Timber Forest Product (NTFP) commodities that are used by the people of Indonesia. This study was conducted to determine the effect of differences in age and axial position on anatomical variations and physical properties of wulung bamboo so that it can support better utilization of wulung bamboo. The research design used was Completely Randomized Design (CRD) with parameters tested including physical properties, fiber dimensions and derivative values, and cell proportions.

The results showed that wulung bamboo had an average fresh and air dry moisture content of 191.80% and 15.03%, respectively. The average result of fresh, air dry, and kiln dry specific gravity respectively were 0.36; 0.57; 0.52. The average results of shrinkage from fresh to air dry conditions in the thickness, width, and length (longitudinal) directions respectively were 18.22%; 10.98%; 0.48%. The average results of fiber length, fiber diameter, lumen diameter, and cell wall thickness respectively were 2.39 mm; 18.42  $\mu\text{m}$ ; 13.16  $\mu\text{m}$ ; 2.63  $\mu\text{m}$ . The average results of the proportions of fiber, parenchyma, vessels, sclerenchyma, phloem, and intercellular space respectively were 35.07%, 38.14%, 6.32%, 16.06%, 3.16%, 1, 26%.

Based on the research that has been done on the observed parameters, it can be concluded that the age level factor affects the diversity of physical properties, fiber diameter, fiber wall thickness, and the proportion of intercellular space while the axial position affects the diversity of physical properties of vessel proportions, sclerenchyma proportions, proportion of phloem, and has no effect on variations in fiber dimensions.

Keywords: Specific Gravity, Fiber Dimension, NTFP, Cell Proportion, Derivative of Fiber Dimension