

VARIASI AKSIAL SIFAT FISIKA DAN DIMENSI SERAT BAMBU APUS  
(*Gigantochloa apus* Kurz.) DARI TIGA KETINGGIAN TEMPAT TUMBUH  
DI KABUPATEN KULON PROGO

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INTISARI

Bambu apus merupakan jenis tanaman yang memegang peranan cukup penting dalam kehidupan masyarakat di Provinsi Daerah Istimewa Yogyakarta. Tanaman ini banyak dijumpai di keempat kabupaten yang ada di provinsi ini, namun informasi berkaitan dengan sifat-sifat bambu apus yang tersedia, umumnya hanya berasal dari Kabupaten Sleman dan Bantul. Suatu usaha untuk memberikan gambaran mengenai sifat-sifat bambu yang juga banyak tumbuh di kabupaten Kulon Progo dengan topografinya yang berbukit-bukit telah dilakukan dengan meneliti sifat fisika dan dimensi seratnya.

Penelitian ini menggunakan rancangan acak lengkap dengan dua faktor yaitu ketinggian tempat (<100 mdpl, antara 100-300 mdpl, dan >300 mdpl) dan kedudukan aksial (pangkal, tengah dan ujung). Kedua faktor diulang 3 kali sehingga ada 27 sampel dan dianalisis keragamannya. Parameter yang diuji adalah sifat fisika dan dimensi serat. Sifat fisika meliputi kadar air, berat jenis, dan perubahan dimensi. Dimensi serat meliputi panjang serat, diameter serat, diameter lumen, tebal dinding serat dan nilai turunan.

Hasil penelitian menunjukkan bahwa bambu apus (*Gigantochloa apus* Kurz.) memiliki kadar air sebesar 126,63% (75,65% – 196,01%) dan berat jenis sebesar 0,52 (0,37 – 0,66), penyusutan longitudinal sebesar 0,62% (0,25% - 1,01%), penyusutan lebar/tangensial sebesar 6,39% (5,15% - 7,40%) dan penyusutan tebal/radial sebesar 6,77% (4,38% - 8,47%). Nilai panjang serat sebesar 3,46 mm (3,07 – 3,93 mm), diameter serat sebesar 13,55  $\mu\text{m}$  (11,17 – 15,56  $\mu\text{m}$ ), diameter lumen sebesar 3,80  $\mu\text{m}$  (2,07 – 6,18  $\mu\text{m}$ ), dan tebal dinding serat sebesar 9,75  $\mu\text{m}$  (8,49 – 10,80  $\mu\text{m}$ ). Ditinjau dari nilai turunan seratnya bambu apus memiliki kualitas yang termasuk kurang sampai baik atau rata-rata berkualitas cukup digunakan sebagai bahan baku pulp.

*Kata kunci: bambu apus, kedudukan aksial, ketinggian tempat, sifat fisika, dimensi serat*

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AXIAL VARIATION OF PHYSICAL PROPERTIES AND FIBER  
DIMENSIONS OF BAMBOO APUS (*Gigantochloa apus* Kurz.) GROWING ON  
THREE DIFFERENT ALTITUDE IN KULON PROGO REGENCY

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ABSTRACT

Bamboo apus is one of the important plant in the life of the people in the Province of Daerah Istimewa Yogyakarta (DIY). Although this plant could easily be found in many area of the four districts of DIY, available information related to its properties is mostly from those growing in Sleman and Bantul regency. A study on the physical properties as well as fiber dimension of bamboo apus growing on various altitudes in Kulon Progo regency was then conducted.

The study was conducted by using a complete randomized design of two factors, namely altitude (<100 masl, between 100-300 meters above sea level, and >300 masl) and axial position (base, middle and end). Both factors were repeated three times so as many as 27 samples were analyzed their variance. The parameters tested are the physical properties and dimensions of the fiber. Physical properties were moisture content, specific gravity, and dimensional changes. Dimensional fibers covering fiber length, fiber diameter, lumen diameter, wall thickness and fiber derived value.

The results showed that bamboo apus (*Gigantochloa apus* Kurz.) has an average value of moisture content of 126.63% (75.65% - 196.01%), specific gravity of 0.52 (0.37 to 0.66), longitudinal shrinkage of 0.62% (0.25% - 1.01%), width/tangential shrinkage of 6.39% (5.15% - 7.40%) and thickness/radially shrinkage at 6, 77% (4.38% - 8.47%). Bambu apus has fiber length of 3.46 mm (3.07 to 3.93 mm), fiber diameter of 13.55  $\mu\text{m}$  (11.17 to 15.56  $\mu\text{m}$ ), lumen diameter of 3.80  $\mu\text{m}$  (2.07 to 6, 18  $\mu\text{m}$ ), and fiber wall thickness of 9.75  $\mu\text{m}$  (8.49 to 10.80  $\mu\text{m}$ ). Viewed from the value of derivatives bamboo apus have fiber quality including less use as the raw material of pulp.

*Keywords : bamboo apus, axial position, altitude, physical characteristics, fiber dimensions*

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