

VARIASI RADIAL SIFAT FISIKA DAN DIMENSI SERAT KAYU JATI KLON UMUR 10 TAHUN PADA TIGA KELAS DIAMETER

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INTISARI

Jati (*Tectona grandis* Linn F.) merupakan salah satu jenis kayu yang paling banyak diminati sejak dahulu karena penampilannya yang menarik, kuat, memiliki keawetan alami yang tinggi serta pengerjaannya yang mudah. Kebutuhan akan kayu jati di Indonesia terus meningkat setiap tahunnya, namun produksinya masih terbatas. Pemanfaatan kayu jati cepat tumbuh diharapkan dapat menjadi alternatif dalam memenuhi kebutuhan kayu jati sebagai kebutuhan industri maupun rumah tangga. Jati klon ini merupakan jati hasil pemuliaan produksi bersama Seameo Biotrop serta PT PPA Agricola yang dikembangkan di Bogor, Jawa Barat.

Penelitian ini menggunakan pohon jati klon berumur 10 tahun yang ditanam di lahan milik CV. Lintang Jati Kencana yang berlokasi di Kalurahan Sidoharjo, Kapanewon Tepus, Gunungkidul, D.I.Y., dan dilakukan untuk mengetahui sifat fisika (kadar air (KA), berat jenis (BJ), dan perubahan dimensi), dan dimensi serat (panjang serat, diameter sel, diameter lumen, tebal dinding sel), dengan dua faktor yaitu kedudukan radial dan kelas ukuran diameter. Penelitian menggunakan rancangan acak lengkap dengan tiga ulangan.

Hasil penelitian menunjukkan nilai rerata (\pm standar deviasi) sebagai berikut: KA segar 120,11% \pm 6,09; KA kering udara 14,96% \pm 1,22; BJ segar 0,51 \pm 0,03; BJ kering udara 0,53 \pm 0,04; BJ kering tanur 0,57 \pm 0,04; penyusutan total radial, tangensial, dan longitudinal berturut-turut sebesar 2,87% \pm 1,13; 5,36% \pm 1,23; 0,19% \pm 0,03; panjang serat 1.048 μm \pm 0,547; diameter sel 20,46 μm \pm 0,77; diameter lumen 13,92 μm \pm 0,69; tebal dinding sel 3,36 μm \pm 0,32.

Kata kunci : Jati klon, sifat fisika, dimensi serat, kedudukan radial, kelas ukuran diameter

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RADIAL VARIATIONS OF PHYSICAL PROPERTIES AND FIBER'S DIMENSION OF 10 YEARS CLONAL TEAK WOOD

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ABSTRACT

Teak (*Tectona grandis* Linn F.) is one of the most popular types of wood since a long time ago because of its attractive appearance, strength, high natural durability and easy workmanship. The demand for teak in Indonesia continues to increase every year, but its production is still limited. The use of fast-growing teak is expected to be an alternative in meeting the needs of teak for industrial and household needs. This clonal teak is the result of breeding produced with Seameo Biotrop and PT PPA Agricola which was developed in Bogor, West Java.

This study used a 10-year-old clonal teak tree planted on land owned by CV. Lintang Jati Kencana located in Kalurahan Sidoharjo, Kapanewon Tepus, Gunungkidul, D.I.Y., and was conducted to determine the physical properties (Moisture Content (MC), Specific Gravity (SG), and dimensional stability), and fiber dimensions (fiber length, cell diameter, lumen diameter, cell wall thickness), with two factors, namely radial position and diameter size class. The study used a completely randomized design with three replications.

The results showed the average value (\pm standard deviation) as follows: Green MC was $120,11\% \pm 6.09$; air-dry MC was $14.96\% \pm 1.22$; Green SG was 0.51 ± 0.03 ; air-dry SG was 0.53 ± 0.04 ; oven-dry SG was 0.57 ± 0.04 ; the total radial, tangential, and longitudinal shrinkage were respectively $3.36\% \pm 0.86$; $5.90\% \pm 1.22$; $0.61\% \pm 0.25$; fiber length was $1,048 \mu\text{m} \pm 0.547$; cell diameter was $20.46 \mu\text{m} \pm 0.77$; lumen diameter was $13.92 \mu\text{m} \pm 0.69$; the cell wall was $3.36 \mu\text{m} \pm 0.32$.

Keywords : Clonal teak, physical properties, fiber dimensions, radial position, diameter size class

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