

**KARAKTERISTIK SERAT DAN SIFAT FISIKA KAYU BULAT JATI
(*Tectona Grandis* L.F.) YANG TERSEKANG CACAT BUSUK HATI DARI
HUTAN RAKYAT KABUPATEN GUNUNGKIDUL**

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INTISARI

Serangan busuk hati pada kayu jati sangat merugikan karena bagian kayu akan hancur akibat pembusukan. Busuk hati berpengaruh pada penurunan rendemen, dan kualitas kayu. Agar pemanfaatan kayu dapat optimal, perlu diketahui karakteristik serat, sifat fisika dan proporsi sel kayu bulat jati yang terserang cacat busuk hati dengan sampel penelitian diambil dari hutan rakyat kabupaten Gunung Kidul.

Penelitian ini menggunakan rancangan acak lengkap dengan 3 ulangan dan 2 faktor yaitu kedudukan radial (dekat hati, tengah dan dekat kulit) dan tempat tumbuh (Kecamatan Nglipar, Playen dan Panggang). Hasil analisis keragamannya jika berbeda nyata kemudian diuji lanjut dengan uji HSD (*Honestly Significant Difference*). Pembuatan contoh uji dan pengujian mengikuti *British Standard* nomor 373 tahun 1957.

Hasil penelitian ini menunjukkan bahwa luas serangan cacat busuk hati berbanding lurus dengan luas penampang bontos kayu bulat jati. Lokasi tempat tumbuh memberikan pengaruh yang sangat nyata terhadap luas serangan cacat busuk hati dengan persentase terbesar di Kecamatan Nglipar (3,43%) kemudian Kecamatan Playen (3,14%) dan terakhir Kecamatan Panggang (2,39%). Tempat tumbuh (kecamatan) dan kedudukan radial kayu dalam pohon berpengaruh sangat nyata terhadap kadar air (KA) basah, berat jenis (BJ) volume kering tanur dan intensitas luas serangan cacat busuk hati. Semakin besar nilai KA segar maka persentase luas serangan busuk hati akan semakin besar sedangkan nilai BJ volume kering tanur semakin kecil. Nilai KA segar rerata Kecamatan Panggang, Playen dan Nglipar secara berurutan adalah 80,39%, 81,9% dan 83,56%. Nilai BJ volume kering tanur rerata Kecamatan Panggang, Playen dan Nglipar secara berurutan adalah 0,72; 0,67; dan 0,64. Panjang serat tidak normal (lebih pendek) pada 2 lingkaran tahun berdampingan / berdekatan dengan posisi serangan busuk hati, panjang serat normal mulai lingkaran tahun ke-3 setelah serangan cacat busuk hati. Proporsi sel pada arah radial kayu jati masing-masing sel serabut 55,90 %, sel pembuluh 13,62 %, sel jari-jari 18,50 % dan sel parenkim 12,28 %. Nilai rata-rata proporsi sel kayu jati tergolong normal, sehingga diindikasikan serangan cacat busuk hati tidak berpengaruh terhadap proporsi sel kayu jati.

Kata kunci : Jati, busuk hati, sifat fisika kayu, karakteristik serat, letak radial, proporsi sel, berat jenis, kadar air

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FIBER and PHYSICAL CHARACTERISTICS OF TEAK LOG (*Tentona grandis* L.F.) WHICH ATTACKED HEARTROT FROM KABUPATEN GUNUNGKIDUL COMMUNITY FOREST

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ABSTRACT

Heartrot attack on the teak wood is very harmful because the wood will be destroyed by decay. Heartrot affects on the decrease in the yield, and quality of teak wood. In order to optimal the utilization of wood, it is important to know the characteristics of the fiber, physical properties and the proportion of cells of teak logs infected with heartrot. Teak wood sample were taken from community forest Kabupaten Gunungkidul.

This study was carried out by using Completely Randomized Design (CRD) of two factors that is radial positions (nearby pith, middle, and near by bark) and site growth (Kecamatan Nglipar, Playen and Panggang). If result of variance analysis significantly different then tested by HSD test. Teak wood samples used for the measurement were prepared according British Standard of Method BS 373 1975.

These results indicate that the heartrot cross-sectional area linearly related to the cross sectional area of the base of teak logs. The site growth was significantly affected to the heartrot attack with the largest percentage was found in Kecamatan Nglipar (3.43%) then Playen (3.14%) and and last Panggang (2.39%). Site growth (kecamatan) and radial position factor was very significantly affected to green Moisture Content (MC), oven-dry Spesific Grafity (SG) and broad intensity heartrot attack. If the value of green MC large the percentage of heartrot attack will increase and oven-dry SG will be small. Green MC average Kecamatan Panggang, Playen and Nglipar are 80,39%, 81,9% and 83,56%. Oven-dry SG average Kecamatan Panggang, Playen and Nglipar are 0,72; 0,67; and 0,64. Fiber length abnormal (shorter) at two growth rings side by side / adjacent to the heartrot attack position, normal fiber length from the third growth cycle after heartrot attack. The proportion of cells in the radial position of teak wood: fiber 55.90%, vessel 13.62%, rays 18.50% and parenchyma 12.28%. The average value of the cells proportion teak wood classified as normal, so indicated heartrot attacks have no affect on the ceels proportion of teak.

Keyword: Teak, Heart rot, wood physical properties, fiber characteristics, radial position, cell proportion, specific gravity, moisture Content

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