



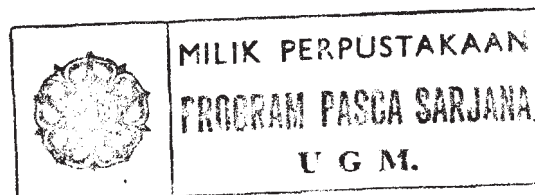
## INTISARI

Pemeliharaan tegakan di HTI dilakukan dengan jalan penjarangan, pemangkasan, pengaturan jarak tanam, pemilihan tempat tumbuh dan pemupukan. Hal ini dilakukan semata-mata demi kuantitas dari tegakan tersebut, volume yang banyak tanpa memperhatikan kualitas kayu merupakan pemborosan penggunaan bahan baku. Penelitian ini bertujuan untuk menganalisis pengaruh penjarangan terhadap pertumbuhan diameter dan tinggi pohon, indikator kualitas kayu guna efisiensi penggunaan di masa yang akan datang.

Pengaruh pertumbuhan akibat penjarangan pada plot penelitian dijarangi dan tidak dijarangi (masing-masing 0,5 ha) diamati setelah sebelas bulan penjarangan di HTI-Trans PT. BHP, Luwuk Banggai, Sulawesi Tengah. Parameter yang diukur adalah diameter setinggi dada, tinggi total dan jumlah pohon dalam areal penelitian. Pohon pilihan yang dijadikan sampel penelitian, dipotong menjadi berukuran 50 cm selang 1 m pada batang sampai batas diameter 10 cm. Pengambilan sampel penelitian batang atas dan cabang masing-masing dipotong 30 cm selang 20 cm dan 20 cm selang 20 cm, kemudian diuji sifat dasarnya. Batang dan limbah (batang atas dan cabang) dibuat pulp selanjutnya papan serat berkerapatan sedang dan diuji berdasarkan standar ASTM 1037-64.

Hasil penelitian memberikan informasi bahwa pertumbuhan diameter pada tegakan yang dijarangi berbeda nyata dibanding tegakan yang tidak dijarangi (2,26 cm dan 1,51 cm), sementara pertumbuhan tinggi tidak berbeda nyata (2,89 cm dan 3,10 cm). Sifat dasar batang dipengaruhi perlakuan penjarangan yaitu pada panjang serat, diameter serat, kandungan ekstraktif dan lignin. Sifat dasar yang dipengaruhi oleh arah axial yaitu kadar air, berat jenis, panjang serat dan tebal dinding serat, sedangkan pada arah radial yaitu kadar air, berat jenis, panjang serat, diameter serat dan kandungan ekstraktif. Kandungan ekstraktif batang atas, batang, dan cabang berbeda akibat penjarangan, ekstraktif tegakan yang tidak dijarangi lebih tinggi (4,60 %) dari pada yang dijarangi (3,47%). Sifat papan serat seperti penyerapan air dan keteguhan tekan sejajar serat dipengaruhi oleh penjarangan. Produk (papan serat) dari tegakan yang dijarangi lebih baik dari yang tidak dijarangi. Perlakuan penjarangan menghasilkan lebih banyak limbah (batang atas dan cabang).

Kata kunci: HTI, Penjarangan, Kualitas Kayu



## ABSTRACT

The stand management in HTI is performed by means of thinning, pruning, spacing, selecting growth spot area, and fertilization. These are accomplished merely for the quality of the stands itself, although toward a large volume while neglecting the wood quality would be a big loss (wasting) of raw materials. The study aims at analyzing the thinning influences on the tree diameter growth and height growth, as well as the wood quality indicators for efficient utilization in the future.

The growth in thinned and the non-thinned wood stand were observed 0.5 ha research plot areas after eleven months. The wood stand is located at HTI-Trans, PT. BHP, Luwuk Banggai, Central Sulawesi. The measured parameters were diameter breast height (dbh), total height, and the number of trees within the research plot areas or stands density. Selected trees that were chosen as research sample are cut into 50 cm long for every 1 m up to a diameter of 10 cm of the stem. For the top of the tree and branches were cut into 30 cm for every 20 cm, and 20 cm long for every 20 cm respectively proceeded by analysis of the basic characteristics. Stem and waste (top of the tree and branch) were then pulped and prepared for Medium Density Fiberboard (MDF) products then were tested based on the ASTM 1037-64.

The results of the study revealed that the tree diameter growth on the thinned stands was significantly different to the non-thinned stands (2.26 cm and 1.51 cm), while trees height growth not significant (2.89 cm and 3.10 cm). Basic characteristics of the stem were affected by thinning. They were fiber length, fiber diameter, extractives and lignin contents. The basic characteristics affected by axial position were moisture content, specific gravity, fiber length, and fiber wall thickness, and by radial position were moisture content, specific gravity, fiber length, fiber diameter and extractive content. The extractive contents of top of the tree, stem and branches varied due to the thinning, the contents from the stands of the non-thinned are higher (4.60%) than the thinned one (3.47%). The fiberboard properties such as the water absorption and compression parallel to surface strength were influenced by thinning. The thinned stand product (MDF) was better than the non thinned one. The thinning treatment produced higher parts of top and branch.

Keywords: HTI, Thinning, Wood quality