

EVALUASI GENETIK DAN SELEKSI POHON INDUK UNTUK MATERI GENERATIF DAN VEGETATIF PADA HALF-SIB *Eucalyptus alba* DI KHDTK WANAGAMA 1

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INTIS ARI

Eucalyptus sp. mempunyai nilai ekonomi yang tinggi karena digunakan sebagai bahan baku di banyak industri seperti industri minyak atsiri, pulp dan kertas, serta industri kayu pertukangan. Salah satu jenisnya yaitu *Eucalyptus alba* sebagai bahan baku industri kayu pertukangan karena pertumbuhannya yang relatif cepat, dan mengkategorikan *E. alba* sebagai *fast growing species*. *E. Alba* sendiri telah dikembangkan di KHDTK Wanagama I pada tahun 1994. Tujuan dilakukannya penelitian ini yaitu untuk melakukan evaluasi genetik Uji Keturunan Half-Sib *Eucalyptus alba* dan mengembangkan pertanamannya lewat materi yang tersedia menjadi satu bentuk yang memungkinkan untuk dikonversi menjadi sumber benih.

Penelitian dilakukan di Petak 18 KHDTK Wanagama I, Gunungkidul pada bulan November 2020. Parameter yang diamati meliputi data kuantitatif (tinggi, tbb, dan diameter) dan kualitatif sesuai dengan Karakter Penilaian Pohon Plus.

Jumlah pohon yang diamati sebanyak 314 pohon. Rancangan penelitian yang digunakan adalah Rancangan Acak Kelompok Tak Lengkap dengan 120 famili, setiap famili terdiri atas 4 *treeplot* dan replikasi 5 blok. Analisis data dilakukan dengan ANOVA test, ranking data serta pertimbangan penjumlahan hasil skoring.

Hasil analisis varians menunjukkan adanya pengaruh signifikan famili pada seluruh parameter yang diamati. Rerata tinggi 8,84 m; rerata tbb 3,75 m; dan diameter 0,14 m. Dari hasil ranking terhadap data kualitatif maupun kuantitatif, didapatkan 3 kandidat pohon plus *E. alba* untuk materi generatif maupun vegetatif diantaranya pohon nomor 875A B3T1, 1000A B1T3 dan 79A B2T4.

Kata kunci: *Eucalyptus Alba*, pertumbuhan, pohon plus, KHDTK Wanagama I

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GENETIC EVALUATION AND SELECTION OF PARENT TREES FOR GENERATIVE AND VEGETATIVE MATERIALS OF *HALF-SIB* *Eucalyptus alba* AT KHD TK WANAGAMA

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ABSTRACT

Eucalyptus sp. has high economic value because it is used as a raw material in many industries such as the essential oil, pulp and paper, and wood construction. One of the species is *Eucalyptus alba* as a raw material for the wood construction because of its categorizes *E. alba* as a fast growing species. *E. alba* has been planted in KHD TK Wanagama I, in 1994. The purpose of this research is to evaluate genetic of *Half-Sib Eucalyptus alba* and developing through available materials to be converted into seed sources.

The research was conducted at Petak 18 KHD TK Wanagama I, Gunungkidul in November 2020. Parameters observed included quantitative data (height, branch-free bole height, and diameter) and qualitative data according to the Manual of Plus Tree Assessment. The total number of trees that had been observed were 314 trees. The design used in this study was Randomized Incomplete Block Design with 120 families, each family consist of 4 tree plots and 5 blocks. Data were analyzed using ANOVA test, ranked the data based on the sum of the scoring result.

The results of the analysis of variance showed that there were significant differences in the effect of the family on the parameters. The average of height was 8,84 m; the tbbc was 3,75 m; and the dbh was 0,14 m. The result of data ranking obtained 3 plus tree candidates of *E. alba* for generative and vegetative materials: tree number 875A B3T1, 1000A B1T3 and 79A B2T4.

Keywords: *Eucalyptus Alba*, growth, plus tree, KHD TK Wanagama I

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