

## **SELEKSI CALON POHON INDUK UNTUK PROPAGASI VEGETATIF PADA FAMILI UJI KETURUNAN HIBRID EKALIPTUS**

**(*Eucalyptus urophylla* S.T. Blake x *Eucalyptus alba* Reinw. Ex Bl)**

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### **INTISARI**

*Eucalyptus* sp. adalah salah satu jenis prioritas dalam pembangunan Hutan Tanaman Industri. Upaya untuk memperoleh varietas unggul dalam jenis tersebut dilakukan melalui hibridisasi. Hibrid *Eucalyptus urophylla* x *E. Alba* telah dikembangkan di KHDTK Wanagama I pada tahun 1994. Evaluasi umur 6 bulan menunjukkan peningkatan pertumbuhan pada hasil hibridisasi dengan induk betina *E. urophylla*. Tujuan dilakukannya penelitian ini yaitu untuk mengetahui variasi pertumbuhan famili dan sifat kayu pada uji keturunan hibrid *Eucalyptus urophylla* x *E. alba* dan memilih individu serta famili sebagai kandidat pohon induk untuk materi propagasi vegetatif.

Penelitian dilakukan di Petak 17 KHDTK Wanagama I, Gunungkidul pada bulan Maret dan Agustus 2020. Parameter yang diamati meliputi tinggi, tinggi batang bebas cabang, diameter dan penetrasi pilodyn. Jumlah pohon yang diamati sebanyak 73 pohon. Rancangan penelitian yang digunakan adalah Rancangan Acak Berblok Lengkap (RCBD) dengan 17 famili, setiap famili terdiri atas 4 *treeplot* dan replikasi 6 blok. Pertanaman terdiri atas 6 kombinasi persilangan antara *Eucalyptus urophylla* (U) dan *Eucalyptus alba* (A) meliputi UA, UU, AA, AU, A-, dan U-. Data dianalisis dengan ANOVA dan Uji Lanjut DMRT.

Hasil analisis varians menunjukkan adanya pengaruh signifikan famili pada seluruh parameter yang diamati. Taksiran nilai heritabilitas famili pada karakter tinggi, tinggi batang bebas cabang, diameter, dan penetrasi pilodyn berturut-turut sebesar 0,68; 0,59; 0,47; 0,44, dan heritabilitas individu sebesar 0,87; 0,78; 0,68; 0,78. Individu yang terpilih menjadi kandidat pohon induk untuk propagasi vegetatif adalah A2U1 B6T2, A3U3 B1T1, U2A3 B1T2, U3A1 B5T1, U2A3 B4T3, sedangkan famili yang terpilih adalah A3U3, U3U1, dan A1U4.

Kata kunci: hibrid, *Eucalyptus urophylla*, *Eucalyptus Alba*, pertumbuhan, penetrasi pilodyn

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## SELECTION OF PARENT TREE CANDIDATES FOR VEGETATIVE PROPAGATION OF EUCALYPTUS HIBRID FAMILY

(*Eucalyptus urophylla* S.T. Blake x *Eucalyptus alba* Reinw. Ex BI)

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### ABSTRACT

*Eucalyptus* sp. is one of the prioritized species in the development of Industrial Forest Plantation. Efforts have been made to obtain superior varieties of this species through hybridization. *Eucalyptus urophylla* x *E. alba* hybrid is one of hybrids planted in KHDTK Wanagama I, in 1994. Evaluation at the age 6 months showed increased growth in hybrids with *E. urophylla* as female parent. The purpose of this study was to determine variations in growth and wood properties in the *Eucalyptus urophylla* x *E. alba* hybrid, and to select individuals and families as parent tree candidates for vegetative propagation material.

The research was conducted at Petak 17 KHDTK Wanagama I, Gunungkidul in March and August 2020. Parameters observed included height, clear bole height, diameter and pilodyn penetration. The total number of trees that had been observed were 73 trees. The design used in this study was randomized complete block design with 17 families, each family consist of 4 treeplots and 6 blocks. The plantations consist of 6 cross combinations between *E. urophylla* (U) and *E. alba* (A) which include UA, UU, AA, AU, A-, U-. Data were analyzed using ANOVA test followed by DMRT test.

The results of the analysis of variance showed that there were significant differences in the effect of the family on the parameters. Estimation of narrow-sense heritability at family level obtained from the characteristics of height, clear bole height, diameter, and pilodyn penetration are 0,68; 0,59; 0,47; 0,44, and the estimation on individual-level heritability are 0,87; 0,78; 0,68; 0,78. Individuals selected as candidate mother trees for vegetative propagation based on ranking are A2U1 B6T2, A3U3 B1T1, U2A3 B1T2, U3A1 B5T1, U2A3 B4T3, while the families selected to be candidate parent trees are A3U3, U3U1, and A1U4.

Keywords: hybrid, *Eucalyptus urophylla*, *Eucalyptus Alba*, growth, pilodyn penetration

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