

VARIASI PERTUMBUHAN SEMAI KAYU PUTIH (*Melaleuca cajuputi* subsp. *cajuputi* Powell) UNTUK UJI KETURUNAN GENERASI F3 DI BPDAS SERAYU OPAK PROGO

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INTISARI

Tanaman kayu putih (*Melaleuca cajuputi* subsp. *cajuputi* Powell) merupakan tanaman kehutanan dengan nilai ekologi dan komoditi perdagangan yang tinggi. Kayu putih dikenal sebagai tanaman penghasil Hasil Hutan Bukan Kayu (HHBK) yaitu minyak kayu putih. Di Indonesia produksi minyak kayu putih diperkirakan 650 ton/tahun, sedangkan kebutuhan sebesar 3.500 ton/tahun. Upaya peningkatan produktivitas minyak kayu putih telah dilakukan pembangunan uji keturunan generasi F1 tahun 1998, dan F2 pada tahun 2008. Tujuan dari penelitian ini untuk mengetahui variasi pertumbuhan di tingkat semai dari famili-famili yang akan digunakan untuk pembangunan uji keturunan generasi F3.

Penelitian ini dilakukan pada kayu putih pada tingkat semai menggunakan bahan tanaman dari famili-famili terpilih dari F1 dan F2, ditambah dengan F0 yang belum pernah diuji. Benih siap saphi disemaikan sampai umur 3,5 bulan menggunakan rancangan penelitian Rancangan Acak Lengkap Berkelompok (RALB) 4 *treeplot* dan 5 blok. Pengamatan dilakukan dari jumlah benih berkecambah, presentase hidup semai, tinggi, diameter, dan jumlah daun. Hasil dianalisis dengan analisis varians (ANOVA), uji lanjut jika terdapat beda nyata menggunakan *Duncan Multiple Range Test* (DMRT) dan pemeringkatan multisifat menggunakan indeks seleksi.

Hasil pengecambahan benih didapatkan 39 famili untuk bisa disemaikan. Pengamatan setelah 3,5 bulan menunjukkan hasil kemampuan adaptabilitas kayu putih di persemaian cukup tinggi dengan presentase hidup 85,13%. Hasil analisis varians menunjukkan terdapat beda nyata antar famili pada sifat tinggi, diameter dan jumlah daun. Kelompok famili terbaik didapatkan menggunakan pemeringkatan multisifat dengan indeks seleksi yaitu diantaranya famili bernomor 46, 49, 42, 60, dan 98. Kelompok famili terbaik dapat menjadi pertimbangan untuk mendapatkan perhatian pasca penanaman.

Kata Kunci: kayu putih, uji keturunan, pemeringkatan multisifat

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GROWTH VARIATION OF CAJUPUT (*Melaleuca cajuputi* subsp. *cajuputi* Powell) SEEDLINGS FOR F3 PROGENY TEST AT BPDAS SERAYU OPAK PROGO

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ABSTRACT

Cajuput (*Melaleuca cajuputi* subsp. *cajuputi* Powell) is a forestry plant with high ecological value and commercial commodity. Cajuput is known as a producer of Non-Timber Forest Products (HHBK), specifically cajuput oil. In Indonesia, cajuput oil production is estimated at 650 tons/year, while the demand is 3,500 tons/year. In order to increase the productivity of cajuput oil have been made through the establishment of F1 progeny tests in 1998 and F2 in 2008. The objective of this research is to identify the growth variation at the seedling stage of families that will be used for the development of F3 progeny tests.

This research was conducted on cajuput seedlings using plant materials from selected families from F1 and F2, along with a F0 that has not been tested before. Seedlings were grown for 3.5 months using a Randomized Complete Block Design (RCBD) with 4 tree plots and 5 blocks. Observations were made on the number of germinated seeds, seedling survival percentage, height, diameter, and leaf count. The results were analyzed using analysis of variance (ANOVA), followed by (DMRT) if significant differences were found, and multitrait ranking using a selection index.

The germination results showed that 39 families were suitable for sowing. After 3.5 months, observations indicated that cajuput had a fairly high adaptability in nurseries, with a survival rate of 85.13%. The ANOVA results revealed significant differences among families in terms of height, diameter, and leaf count. The best family group was determined using a multitrait ranking with a selection index, which included families numbered 46, 49, 42, 60, and 98. These top families may be considered for further attention after planting.

Keywords: Cajuput, progeny tests, multitrait ranking

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