

SELEKSI POHON GMELINA (*Gmelina arborea* Roxb) UMUR 27 TAHUN YANG BERPOTENSI SEBAGAI PENGHASIL BENIH DI KHDTK WANAGAMA

Devi Astuti¹

Yeni W. N. Ratnaningrum²

Winastuti Dwi Atmanto²

Intisari

Sebagai upaya pemenuhan kebutuhan benih gmelina yang berkualitas, dibutuhkan upaya untuk menyeleksi pohon yang berpotensi sebagai penghasil benih. Tegakan gmelina di petak 17 Wanagama merupakan tegakan yang ditanam pada tahun 1993 dan belum pernah dilakukan evaluasi. Oleh karena itu perlu dilakukan evaluasi untuk mengetahui kualitas fenotipik dan potensi produksi benih dari individu pohon. Penelitian ini bertujuan untuk mengetahui (1) Potensi produksi benih gmelina di petak 17 KHDTK Wanagama; (2) Pengaruh karakter fenotip terhadap produksi buah pada tegakan gmelina; (3) Kandidat pohon induk yang berpotensi sebagai penghasil benih dengan karakteristik fenotip terbaik.

Penghitungan potensi produksi benih dilakukan dengan menaksir total buah pada pohon berbuah. Karakter fenotipik tegakan dengan mengukur antara lain : diameter batang, tinggi pohon dan tinggi batang bebas cabang kemudian dianalisis regresi dan diranking untuk mengetahui pengaruhnya terhadap produksi buah.

Hasil penelitian menunjukkan total produksi buah pada tegakan gmelina di Petak 17 KHDTK Wanagama pada periode pembungaan bulan Oktober 2020 adalah 57355 buah. Persentase pohon yang berbuah sebesar 95%. Karakter fenotipik diameter ($R = 0,92$) berkorelasi positif terhadap total buah, sementara karakter tinggi pohon ($R = 0,03$) dan karakter TBBC ($R = 0,06$) berkorelasi negatif terhadap total buah. Karakter fenotipik yang memiliki pengaruh terbesar terhadap total buah adalah diameter. 10 kandidat pohon induk terbaik dari hasil ranking secara urut yakni pohon nomor 139, 242, 116, 359, 259, 253, 227, 407, 376, dan 221.

Kata kunci: gmelina, potensi produksi benih, karakter fenotipik, seleksi pohon induk, sumber benih

1 Mahasiswa Fakultas Kehutanan Universitas Gadjah Mada

2 Dosen Fakultas Kehutanan Universitas Gadjah Mada

SELECTION OF 27 YEARS OLD GMELINA (*Gmelina arborea* Roxb) TREES WITH POTENTIAL AS A SEED PRODUCER IN KHDTK WANAGAMA

Devi Astuti¹

Yeni W. N. Ratnaningrum²

Winastuti Dwi Atmanto²

Abstract

As an effort to meet the need for quality gmelina seeds, efforts are needed to select trees that have potential as seed producers. Gmelina stands in plot 17 Wanagama are old stands planted in 1993 and have never been evaluated. The first step taken is the need to evaluate the stands, in order to be able to determine the phenotypic quality and seed production potential of the trees in it. This study aims to (1) Find out the potential of gmelina seed production in plot 17 KHDTK Wanagama; (2) Knowing the effect of phenotypic characters on fruit production in gmelina stands and (3) Knowing the potential parent tree candidates as seed producers with the best phenotypic characteristics.

The calculation of the potential seed production was done by estimating the total fruit on fruiting trees. The phenotypic characters of the stands (stem diameter, tree height and branch-free stem height) were measured, analyzed by regression, and then ranked to determine their effect on fruit production.

The results showed the total fruit production in gmelina stands in Plot 17 KHDTK Wanagama in the flowering period in October 2020 was 57355 fruits. The percentage of the fruiting trees was 95%. The phenotypic character of diameter ($R = 0.9193$) was positively correlated with total fruit, while tree height ($R = 0.0300$) and branch-free stem height character ($R = 0.0607$) were negatively correlated with total fruit. The phenotypic character that has the greatest influence on the total fruit is diameter. The 10 best parent tree candidates from the rankings in order are trees numbered 139, 242, 116, 359, 259, 253, 227, 407, 376, and 221.

Keywords: *gmelina, potential seed production, phenotypic characters, parent tree selection, seed sources*

¹ Undergraduate Student of Faculty of Forestry, Universitas Gadjah Mada

² Lecturer of Faculty of Forestry, Universitas Gadjah Mada