

EVALUASI FENOTIP DAN POTENSI PRODUKSI BENIH PADA TEGAKAN HASIL PERMUDAAN ALAM MAHONI DI WANAGAMA UNTUK KONVERSI MENJADI SUMBER BENIH

Sonny Cahya Putra Sihaloho¹
Yeni W. N. Ratnaningrum²
Winastuti Dwi Atmanto²

Intisari

Semakin meningkatnya permintaan kayu mahoni berkualitas di Indonesia mengharuskan perlu diadakan sumber benih mahoni dengan kualitas dan kuantitas yang memadai. Di Yogyakarta, hanya ada satu sumber benih mahoni yang bersertifikat, dan Wanagama berencana membuat sumber benih bersertifikat untuk jenis mahoni. Langkah awal yang dilakukan adalah mengetahui potensi produksi benih tegakan hasil permudaan alam mahoni di Wanagama dan belum pernah dilakukan evaluasi terhadap kualitas fenotipik dan potensi produksi individu di dalamnya. Penelitian ini bertujuan untuk (1) Mengetahui potensi produksi benih mahoni di KHDTK Wanagama; dan (2) Mengetahui hubungan antara karakter fenotip dengan produksi buah pada tegakan mahoni.

Penghitungan potensi produksi benih dilakukan dengan menaksir total buah pada pohon berbuah. Kemudian karakter fenotipik tegakan (diameter batang, tinggi pohon, tinggi batang bebas cabang (TBBC), diameter tajuk, dan total cabang) diukur, dianalisis regresi, serta diranking untuk mengetahui pengaruhnya terhadap produksi buah.

Hasil penelitian menunjukkan total produksi buah pada tegakan mahoni di Petak 5 KHDTK Wanagama pada periode pembungaan bulan September 2020 adalah 2926 buah, dengan persentase pohon yang berbuah sebesar 44,69%. Karakter fenotipik diameter ($R^2 = 0,6502$), tinggi pohon ($R^2 = 0,2352$), diameter tajuk ($R^2 = 0,5658$), dan total cabang ($R^2 = 0,5572$) berkorelasi positif terhadap total buah, sementara karakter tbbc ($R^2 = 0,0097$) berkorelasi negatif terhadap total buah. Karakter fenotipik yang memiliki pengaruh terbesar terhadap total buah adalah diameter. Dari hasil penelitian ini, diperoleh potensi produksi benih dan pengaruh karakter fenotipik terhadap produksi benih untuk selanjutnya dijadikan acuan dalam *up grade* tegakan menjadi sumber benih.

Kata kunci: mahoni, karakter fenotipik, potensi produksi benih, Wanagama, sumber benih

1 Mahasiswa Fakultas Kehutanan Universitas Gadjah Mada

2 Dosen Fakultas Kehutanan Universitas Gadjah Mada

***EVALUATION ON PHENOTYPES AND POTENTIAL SEED PRODUCTION
OF MAHOGANY NATURALLY REGENERATED STAND IN WANAGAMA
FOR SEED SOURCES CONVERSION***

Sonny Cahya Putra Sihaloho¹
Yeni W. N. Ratnaningrum²
Winastuti Dwi Atmanto²

Abstract

The increasing demand on mahogany wood in Indonesia affirm the need for seed sources of mahogany which might ensure the supply of seed in sufficient quality and quantity. Yogyakarta only has one certified mahogany seed source, however Wanagama projected to establish a certified seed source of mahogany. The first step was to determine the potential seed production of mahogany stands in Wanagama, which was developed from natural regeneration of trees planted. Since the phenotypic quality and potential seed production has never been evaluated by far, therefore this study aims to (1) determine the potential seed production of mahogany in Wanagama; and (2) determine the relationship between phenotypic characters and fruit production in mahogany stand.

The potential seed production was determined by estimating the total fruit on the fruiting trees. The phenotypic characters (stem diameter, tree height, free branches stem height, crown diameter, and total branches) were measured, multiple regression analysis was conducted, and ranked to determine the effect of phenotypic characters on fruit production.

Results showed that the total fruit production of mahogany stand in Wanagama in the September 2020 flowering period was 2926 fruits, with a percentage of trees bearing fruit was 44.69%. The phenotypic characters of diameter ($R^2 = 0.6502$), tree height ($R^2 = 0.2352$), crown diameter ($R^2 = 0.5658$), and total branches ($R^2 = 0.5572$) were positively correlated to total fruit, while the character of free branches stem height ($R^2 = 0.0097$) was negatively correlated to total fruit. The total number of branches has the greatest influence on total fruit. Results will be subsequently used as a reference for up-grading stands in seed sources conversion.

Keywords: mahogany, phenotypic characters, potential seed production, Wanagama, seed sources

¹ Undergraduate Student of Faculty of Forestry, Universitas Gadjah Mada

² Lecturer of Faculty of Forestry, Universitas Gadjah Mada