REGENERASI SONOKELING (Dalbergia latifolia Roxb.) DAN PERTUMBUHANNYA PADA HUTAN RAKYAT POLA CAMPUR

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INTISARI

Sonokeling dikenal sebagai pohon peneduh yang sangat cocok pada sistem agroforestri. Dalam 15 tahun terakhir sonokeling memiliki nilai harga sangat tinggi disebabkan keterbatasan keberadaan di lapangan, khususnya di hutan rakyat sangat terbatas dan dengan alasan harga yang tinggi pemanenan sonokeling terus dilakukan hingga sekarang. Salah satu indikator dari kelestarian hutan adalah berhasilnya permudaan/regenerasi sebagai daya dukung hutan, sehingga penelitian "Regenerasi Sonokeling (*Dalbergia latifolia*) dan Pertumbuhannya pada Hutan Rakyat Pola Campur*"* dilakukan untuk mengetahui regenerasi dan pertumbuhan untuk mengetahui keberlanjutannya.

Pengambilan data dilakukan secara *purposive* dengan membagi kerapatan tegakan pada hutan rakyat yaitu kerapatan ringan (< 15 pohon), kerapatan sedang (15 - 30 pohon), dan kerapatan rapat (> 30 pohon) masing-masing 5 sampel. Pengukuran dilakukan dengan membuat *nested sampling*, dengan modifikasi ukuran tingkat hidup pohon dan tiang dilakukan pada petak ukur 20 m x 20 m, tingkat pancang pada petak ukur 5 m x 5 m, dan semai pada petak ukur 2 m x 2 m. Modifikasi dilakukan untuk penggambaran kondisi tegakan yang digambarkan dengan aplikasi SExI-FS. Kondisi tutupan tajuk pada kerapatan ringan 38,55 %, kerapatan sedang 73,25 % dan kerapatan rapat 86, 23 %. Variabel yang diamati meliputi jumlah individu dan ukuran setiap tingkat hidup, pertumbuhan regenerasi (semai dan pancang), ketebalan seresah dan faktor lingkungan (intensitas cahaya, kelembaban, suhu). Analisis data menggunakan jumlah individu semua tingkat hidup per hektar, Indeks Persebaran Morisita, pertumbuhan relatif permudaan, dan *Analisis of Variance* (ANOVA).

Hasil penelitian menunjukan tegakan memiliki Stratum B – D dengan persebaran diameter berbentuk "J" terbalik. Jumlah setiap tingkat hidup sonokeling menunjukan adanya kesenjangan yang cukup lebar antara pancang dan tiang. Pertumbuhan regenerasi sonokeling tertinggi pada kerapatan tegakan ringan dengan nilai pertumbuhan tinggi dan diameter semai 72,05 % dan 44,33 % serta nilai pertumbuhan pancang yaitu 0,18 % dan 0,24 %.

Kata kunci: Agroforestri, keberlanjutan, struktur, komposisi, permudaan/regenerasi

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REGENERATION AND GROWTH RATE OF ROSEWOOD (*Dalbergia latifolia* Roxb.) IN RANDOM MIXTURE COMMUNITY FOREST

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ABSTRACT

Rosewood (*Dalbergia latifolia* Roxb.) or locally known as sonokeling is widely popular as a shade tree that is very suitable for agroforestry systems. In the last 15 years, rosewood has had a very high market value due to its limited existence in nature. The harvesting of rosewood still continues to this day, especially in community forests. This research was aimed to determine the growth and regeneration of rosewood in the random mixture community forest. As successful regeneration is one of the pillars of sustainable forest management, we can further understand the sustainability potential of rosewood in nature.

This research was conducted in Patuk Village, Patuk District, Gunungkidul Regency. Purposive sampling method was used to determine the sample with three land categories, they were low density (< 15 trees), medium density (15 - 30 trees), and high density (> 30 trees) with five sample plots observed within each category. The data were collected using nested sampling, the sizes were 20 m x 20 m for trees and poles, 5 m x 5 m for sapling, and 2 m x 2 m for seedlings. Modification were used to determine the condition of standing tree, visualized using the SExI-Fs. Conditions of tree canopy cover in each category respectively were 38.55 %, 73.25 %, and 86.23 %. The observed parameters of seedlings and saplings were the number and size of each individual as well as the growth rate. While the observed parameters at the life stage of poles and trees were the number of individuals, height, diameter, diameter at breast height (dbh), crown width, tree coordinates (x and y), and environmental factors (light intensity, humidity, temperature). Data were analyzed using the number of individuals per hectare, Morisita Index of Dispersion, and Analysis of Variance (ANOVA).

Results showed that the rosewood stands consist of canopy Stratum B - D with an ‘inverted J’ diameter distribution. The number of individuals in each tree life stage of rosewood indicates a fairly wide gap between sapling and poles. The highest rosewood regeneration rate was found at light stand density with the growth rate of seedlings’ height and diameter of 72.05 % and 44.33 %, while the sapling growth rate were 0.18 % and 0.24 %.

Keywords: Agroforestry, sustainability, structure, composition, regeneration

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