

STUDI KESESUAIAN LAHAN JENIS *Acacia mangium* Willd
PADA HUTAN TANAMAN INDUSTRI DI PT MUSI HUTAN PERSADA
SUBANJERIJU SUMATERA SELATAN

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INTISARI

Upaya pemerintah untuk meningkatkan produktivitas lahan hutan yang kurang produktif dan peningkatan hasil hutan yang berupa kayu dilakukan dengan program Hutan Tanaman Industri. Lahan hutan yang kurang produktif ditanami dengan tanaman hutan dan dikelola dengan silvikultur intensif, sehingga diperoleh hasil yang secara ekonomis menguntungkan. Keberhasilan HTI harus ditunjang oleh tingkat kesesuaian lahan setempat, sehingga penerapan silvikultur secara intensif akan lebih efektif dan efisien. Guna mengetahui pengaruh faktor lahan terhadap pertumbuhan tanaman maka dilakukan studi kesesuaian lahan jenis *Acacia mangium* Willd, pada HTI milik PT Musi Hutan Persada Subanjeriji, Muara Enim Sumatera Selatan.

Penelitian ini dilakukan dengan membuat klasifikasi pertumbuhan tanaman *A. mangium* Willd pada umur 4 tahun, kemudian diadakan uji peranan faktor lahan terhadap pertumbuhan. Parameter pertumbuhan yang diukur adalah tinggi pohon, diameter batang dan jumlah pohon per hektar. Parameter lahan yang diukur adalah kelerengan, pH tanah, kandungan bahan organik, N total, P tersedia, K tersedia, Mn tersedia, Al dapat ditukar, kapasitas pertukaran kation (KPK), permeabilitas, tekstur (% debu, lempung, pasir) dan kedalaman efektif akar. Pengambilan data dilakukan dengan sistematis (*systematic sampling*) merata di semua sampling unit. Klasifikasi dilakukan dengan menganalisis data pohon dengan metode *Minimum Variance Clustering*, sedang peranan faktor lahan terhadap pertumbuhan tiap kelompok dilakukan dengan *Simple Discriminant Analysis*.

Hasil penelitian ini menunjukkan bahwa terdapat perbedaan tingkat kesesuaian lahan pada tiap kelompok yang ditunjukkan adanya perbedaan pertumbuhan tanaman. Terdapat kecenderungan, jika jumlah pohon / ha sedikit maka rata-rata tinggi tanaman semakin tinggi dan rata-rata diameter batang semakin besar. Perbedaan tingkat kesesuaian lahan antar kelompok disebabkan oleh besarnya pengaruh faktor lahan terutama tekstur tanah disusul kemudian N total, pH, Al dapat ditukar dan K tersedia.

A STUDY ON LAND SUITABILITY TO *Acacia mangium* Willd
IN AN INDUSTRIAL FOREST PLANTATION
OF PT MUSI HUTAN PERSADA SUBANJERIJ, SOUTH SUMATERA

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ABSTRACT

The government attempt to improve productivity of forest area which atherwise less productive and to increase forest yield in term of wood is formulated in an Industrial Forest Plantation. Less productive forest areas are planted with commercial wood tree species under intensive silviculture practices such that economically profitable. The success of implementing the policy depends on the proper choice of wood species suitability to the area so that intensive silviculture practices will be efficient and effective. In order to determine what factor(s) of the area affecting land use suitability to *Acacia mangium* Willd, a study was done in Industrial Forest Plantation Area of PT Musi Hutan Persada Subanjeriji Muara Enim South Sumatera.

In this study, Industrial Forest Plantation Area of *A. mangium* Willd of four years old were classified into different groups based on growth and then the tree growth was related to the prevailing conditions of the area. Tree growth parameters being considered were plant height, stem diameter, and tree number per hectare. Prevailing conditions being examined were slope, soil pH, soil organic metter, total N, available P, K, Mn, Exchangeable Al, cation exchange capacity, soil permeability, texture (% of silt, clay, and sand), and effective root volume. Data were collected using systematic sampling covering through out all sampling units. Classification was done by analyzing tree growth data using Minimum Variance Clustering method, while the role of prevailing conditions on tree growth in each cluster was analyzed using Simple Discriminant Analysis.

The result indicated that there were differences in land suitability as was shown from the tree growht. With higer tree number per unit area, there was a tendency for the trees to be higher in height with larger average stem diameter. The factor which discriminating land suitability of varius clusters came from the environmental conditions of the area, particularly soil texture, followed by total N, soil pH, exchangeable Al and available K.

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