STUDI KESESUAIAN LAHAN *Paraserianthes falcataria* (L) Nielsen PADA HUTAN TANAMAN INDUSTRI DI PT MUSI HUTAN PERSADA SUMATERA SELATAN

INTISARI

Keberhasilan pembuatan Hutan Tanaman Industri dalam rangka untuk meningkatkan produktivitas lahan yang kurang produktif dan meningkatkan hasil hutan antara lain ditentukan oleh kesesuaian lahan HTI tersebut terhadap jenis tanaman yang dikembangkan. Maka dicoba diadakan penelitian "**Studi Kesesuaian Lahan Jenis *Paraserianthes falcataria* (L) Nielsen pada Hutan Tanaman Industri PT. Musi Hutan Persada Sumatera Selatan**" untuk mengetahui faktor lahan terhadap pertumbuhan tanaman.

Penelitian ini dilakukan dengan membuat klasifikasi keadaan pertumbuhan tanaman *Paraserianthes falcataria* (L) Nielsen pada umur 4 tahun, kemudian diadakan uji peranan faktor lahan terhadap pertumbuhan tanaman. Parameter pertumbuhan yang diukur adalah tinggi pohon, diameter batang dan jumlah pohon per hektar, sedangkan parameter lahan yang diukur adalah pH, kandungan bahan organik, N-total, P-tersedia, K-tersedia, Mn-tersedia, Al-dapat ditukar, KPK, Fe-oksida bebas, Mo-tersedia, permeabilitas, erodibilitas, tekstur (prosen debu, prosen lempung dan prosen pasir), kedalam efektif dan kelerengan. Pengambilan data dilaksanakan dengan metode *Line Plot Sampling*. Klasifikasi dilakukan dengan menganalisis data pohon dengan metode *Minimum Variance Clustering*, sedang peranan faktor lahan terhadap pertumbuhan masing-masing kelompok dilakukan dengan *Simple Discriminant Analysis*.

Hasil penelitian menunjukkan bahwa terdapat

perbedaan tingkat unit kesesuaian lahan antar kelompok yang disebabkan oleh faktor lahan. Fe-oksida bebas dan Al-dapat ditukar sebagai faktor dominan, disusul kemudian Mn-tersedia, P-tersedia, K-tersedia dan Mo-tersedia.

A STUDY ON LAND SUITABILITY TO *Paraserianthes falcataria* (L) Nielsen IN AN INDUSTRIAL FOREST PLANTATION OF PT. MUSI HUTAN PERSADA SOUTH SUMATERA

ABSTRACT

The success of establishing an industrial forest plantation area in an attemp to improve productivity of forest area which otherwise less productive and to increase forest yield depend on land suitability to the species selected for the industrial forest plantation. A research entitled " **A Study of Land Suitability to *Paraserianthes falcataria* (L) Nielsen in an Industrial Forest Plantation Area of PT. Musi Hutan Persada, South Sumatera**" was done to determine the prevailing factor (s) of the area related to the growth of tree species being grown.

This study was done by classifiying the growth *Paraseriantes falcataria* (L) Nielsen of four years old into several groups 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 of the area being examined were soil pH, soil organic matter, total N, available P, K, Mn, exchangable Al, cation exchenge capacity, free Fe-oxyde, available Mo, soil permeability, soil erodibility, texture (% of silt, clay and sand), effective root volume and slope. Data were collected using Line Plot Sampling Method. Classification was done by analyzing tree growth data using Minimum Variance Clustering Method, while the role of the prevailing conditions on tree growth in each cluster was analyzed using Simple Discriminant Analysis.

The results indicated that there were differences in land suitability for the various groups due to some

prevailing condition of the area. Free Fe oxyde and exchangeable Al were the dominant determinat factor for land suitability to *Paraserianthes falcataria* (L) Nielsen followed by available Mn, P, K and Mo.