

EVALUASI AWAL UJI KETURUNAN 90 FAMILI JATI (*Tectona grandis* L.f.) DI PERUM PERHUTANI KPH CEPU

INTISARI

Evaluasi awal uji keturunan 90 famili jati (*Tectona grandis* L.f.) bertujuan untuk : (1) mengetahui variasi genetik tinggi dan diameter tanaman, (2) mengetahui seedlot terbaik, (3) mengetahui interaksi seedlot dengan lokasi tanaman, (4) menaksir nilai heritabilitas tinggi dan diameter tanaman serta menduga perolehan genetiknya, (5) mengetahui korelasi genetik antara tinggi dengan diameter tanaman. Penelitian dilakukan pada tanaman uji keturunan jati umur enam bulan di Pasar Sore dan Sekaran KPH Cepu. Jumlah seedlot 90, terdiri dari 80 seedlot pohon plus dan 10 seedlot pohon pembanding. Penanaman menggunakan rancangan acak lengkap berblok dengan 20 blok dan satu treeplot. Penanaman dilaksanakan pada bulan Maret 1997 setelah semai berumur tiga bulan dengan jarak tanam 3 x 3 meter.

Hasil penelitian menunjukkan bahwa di Pasar Sore terdapat variasi genetik tinggi dan diameter tanaman, di Sekaran tidak terdapat variasi genetik dan untuk kombinasi lokasi terdapat variasi genetik. Perbandingan antara pohon plus dengan pohon pembanding menunjukkan perbedaan yang nyata di Sekaran dan kombinasi lokasi, sedangkan di Pasar Sore tidak nyata. Interaksi antara seedlot dengan lokasi tanaman tidak nyata. Tiga seedlot terbaik berturut-turut adalah : di Pasar Sore nomor seedlot 125, 117 dan 148; di Sekaran nomor seedlot 36, 148 dan 31; untuk kombinasi lokasi adalah nomor seedlot 148, 136 dan 124. Taksiran nilai heritabilitas termasuk rendah sampai sedang, berkisar antara 0,00697 - 0,16942. Perolehan genetik termasuk rendah, berkisar antara 0,13% - 8,01%. Korelasi genetik antara tinggi dengan diameter tanaman diperoleh nilai positif sebesar 0,4324 di Pasar Sore, 0,5262 di Sekaran dan 0,2942 untuk kombinasi lokasi.

EARLY RESULTS OF TEAK (*Tectona grandis* L.f.) PROGENY TESTS AT CEPU FOREST DISTRICT, CENTRAL JAVA

ABSTRACT

Early result of open-pollinated progeny tests of teak (*Tectona grandis* L. f.) has the objectives to : (1) determine if there is any genetic variation plant height and stem diameter, (2) assess the rank of seedlot, (3) detect the existence of seedlot-site interactions, (4) estimate the heritability and genetic gains of plant height and stem diameter, (5) calculate the genetic correlation between plant height and stem diameter. The progeny tests were established at Perum Perhutani Cepu Forest District, Pasar Sore and Sekaran Sub-district Forest and assessed at six months old. The number of seedlot were 90, consisted of 80 plus trees and 10 average trees. Randomized complete block design using single treeplot with 20 blocks were used. Planting was done in March 1997 using three months old seedling and spaced at 3 x 3 meter.

The results indicated that families were significant genetic variation between families for height and diameter in Pasar Sore. No such variation was detected in Sekaran and in combined analysis. Seedlot-site interactions were not statistically significant. Plus trees were statistically different to the average parent trees in Sekaran and in the combined analysis, but no different in Pasar Sore. The rank of seedlot for the first three families in Pasar Sore were : 125, 117 and 148; in Sekaran were : 36, 148 and 31; in combined analysis were 148, 136 and 124. Heritability estimates varied from 0,00697 to 0,16942. Prediction genetic gains ranged from 0,13% to 8,01%. Genetic correlation between plant height and stem diameter in Pasar Sore, Sekaran and combined analysis were 0,4324, 0,5262 and 0,2942.