

HALF-SIB PROGENY TEST OF MAHOGANY

(*Swietenia* sp)

IN WANAGAHA I AND ITS GROWTH EVALUATION

AT ELEVEN MONTHS OF AGE

ABSTRACT

by :

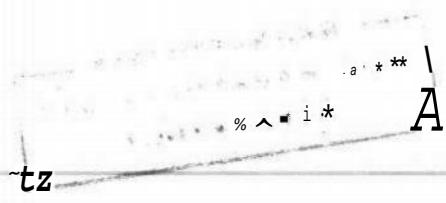
ARNANTO NURPRABOWO

The objective of this experiment are : 1) to study the adaptability of mahogany on the field, 2) to study the genetic variation in tree height and stem diameter, 3) to estimate the narrow sense heritability of family means in tree height and stem diameter and 4) to convert this half-sib progeny test plantation on mahogany into a seed orchard. The establishment of half-sib progeny test plantation on mahogany was located in 17th compartment at Wanagama I, Yogyakarta. The total family used in this experiment were 90 families. It consisted of 41 families selected from so'e, East Nusa Tenggara, and other 49 families from Gunung Kidul, Yogyakarta.

The experiment followed a randomised complete block design with 4 replications, 4 tree plots and 3 x 3 meters spacing.

There were highly significant differences between families and within classes, but not significant differences between classes in tree height and stem diameter. The adaptability in eleven months of age was 75,277 Z.

The estimate of heritability value were 0,27 for height growth and 0,32 for stem diameter . These results indicated that the enviroment factors tended to have stronger role comparing to the genetic factor.



UJI PROGENI "HALF-SIB" MAHONI (*Swietenia sp*)  
DI WANAGAMA I SERTA EVALUASI PERTUMBUHANNYA  
PADA UHUR 11 BULAN

INTISARI

Oleh :  
*Amanto Nurprabowo*

Tujuan dari uji progeni "half-sib" mahoni ini adalah ;  
1) Mengetahui daya adaptasi tanaman mahoni di lapangan,  
2) Untuk mengetahui variasi pertumbuhan tinggi dan diameter  
batang secara genetik, 3) Membuat taksiran nilai  
heritabilitas dalam arti sempit untuk karakter tinggi dan  
diameter batang, serta 4) Diharapkan pertanaman uji progeni  
"half-sib" mahoni ini dapat digunakan sebagai sumber benih.  
Pembangunan tanaman uji progeni "half-sib" mahoni berlokasi  
di Petak 17 Wanagama I, Yogyakarta ini menggunakan 90  
famili, yang terdiri atas 41 famili berasal dari So'e Nusa  
Tenggara Timur (4 famili pohon rata-rata dan 37 pohon  
seleksi), dan 49 famili dari Gunung Kidul, Yogyakarta (4  
famili pohon rata-rata dan 45 pohon seleksi).

Rancangan penelitian yang digunakan adalah Rancangan  
Acak Lengkap Berblok (RCBD), 4 blok, 4 treeplot, jarak tanam  
3m x 3m.

Daya adaptasi yang diperoleh untuk tanaman uji progeni  
mahoni pada umur 11 bulan di Wanagama I adalah 75,277 %.  
Terdapat perbedaan yang nyata antar famili dan dalam kelas,  
tidak berbeda nyata pada antar kelas.

Taksiran nilai heritabilitas untuk ukuran tinggi  
tanaman dan diameter batang tanaman mahoni umur 11 bulan  
berturut - turut diperoleh 0,27 dan 0,32.