

## INTISARI

Penelitian ini bertujuan untuk (1) mengetahui besarnya variasi genetik antar Famili dan antar Sumber Benih Cendana; (2) menaksir nilai heritabilitas semai Cendana; dan (3) mengetahui korelasi genetik antara pertumbuhan meninggi dan diameter semai Cendana.

Penelitian dimulai dengan survei tegakan Cendana di Pulau-pulau Timor, Jawa, dan Sumba. Disusul kemudian dengan Eksplorasi, Pengukuran Biji, Perkecambahan, dan Penelitian semai sampai umur 6 bulan (siap ditanam di lapangan). Penelitian Semai dilaksanakan di Persemaian Fakultas Kehutanan UGM Yogyakarta pada tahun 1993, menggunakan Rancangan Blok Lengkap Acak terdiri dari 6 Blok, 4 Tree plot, dan 115 Famili. Data dianalisis dengan Metode Analisis Varian Irregular Experiment.

Hasil penelitian menunjukkan bahwa terdapat variasi pada ukuran benih *S. album* antar Famili dan antar Sumber Benih. Pada sifat pertumbuhan meninggi semai *S. album* terdapat variasi diantara Famili dan di antara Sumber Benih. Pada sifat pertumbuhan diameter, variasi hanya terjadi diantara Famili tetapi tidak pada antar Sumber Benih. Nilai heritabilitas tinggi semai *S. album* umur 2 bulan sebesar 0,6086 dan pada umur 6 bulan sebesar 0,4907. Sedangkan nilai heritabilitas diameter *S. album* umur 6 bulan sebesar 0,4007. Korelasi antar sifat tinggi dan sifat diameter *S. album* positif dan cukup erat dengan koefisien korelasi genetik sebesar 0,5233.



## ABSTRACT

The objectives of this experiment were : (1) to study genetic variation in height and stem diameter growth of seedlings; (2) to estimate the narrow sense heritability values; (3) to estimate the genetic correlation between height and stem diameter.

The experiment was started with doing survey sandalwood stands in Timor, Java, and Sumba islands, followed with exploration, seed measurement, seed germination, and seedling growth study up to six months old where the sandalwood seedlings were ready to be planted in the field. Seedlings growth study was done at the Nursery of Faculty of Forestry, Gadjah Mada University Yogyakarta in 1993. The experiment followed a Randomized Complete Block Design with six replication of 4-tree row plots using one hundred and fifteen families from seven seed sources. Due to some missing observations, data analysis was done using irregular analysis of variance.

The results indicated that there more significant differences between families, between and within seed sources in height growth. However, diameter growth varied among families only. Narrow sense heritability in height growth was high at two months old ( $h^2 = 0,6086$ ) and low at six months seedlings ( $h^2 = 0,4907$ ). Narrow sense heritability in stem diameter at six months old seedlings was low ( $h^2 = 0,4007$ ). The genetic correlation between the seedlings height and stem diameter was 0,5233.

