



EVALUASI UJI KETURUNAN HALF-SIB
MINDI (*Mella azedarach L.*) UMUR 4 TAHUN
DI WANAGAMA I

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I N T I S A R I

Evaluasi pertanaman pada uji keturunan half-sib Mindi (*M. azedarach L.*) umur 4 tahun di Wanagama I bertujuan untuk mengetahui : (1) tingkat keberhasilan tanaman, (2) variasi pertumbuhan tinggi, diameter batang, tinggi batang bebas cabang, dan bentuk batang, (3) taksiran nilai heritabilitas pada karakter tinggi, diameter batang, tinggi batang bebas cabang, dan bentuk batang, (4) famili terbaik, (5) korelasi genetik antara karakter tinggi, diameter batang, tinggi batang bebas cabang, dan bentuk batang, (6) korelasi antar umur pada karakter tinggi dan diameter batang, (7) tingkat serangaxpenyakit pada batang dan cabang.

Penelitian dilakukan pada pertanaman uji keturunan half-sib Mindi PPGM-T83-1992, bertempat di petak 13, Wanagama I, Gunung Kidul, Yogyakarta; yang terdiri dari 41 seedlot/famili, rancangan acak lengkap berblok (RCBD) 5 blok, 4 treeplot, jarak tanam 3x3 meter.

Hasil penelitian menunjukkan bahwa sampai umur 4 tahun tingkat keberhasilan tanaman mencapai 86,59%. Variasi yang nyata terjadi pada karakter diameter batang dan bentuk batang, sedangkan pada karakter tinggi dan tinggi batang bebas cabang terdapat variasi yang tidak nyata. Famili nomor 070, 092, dan 050 berasal dari Kepuharjo dan Umbulharjo mempunyai nilai rata-rata terbaik untuk semua karakter yang diamati. Taksiran nilai heritabilitas famili pada karakter diameter batang termasuk sedang yaitu sebesar 0,470; sedangkan pada karakter bentuk batang termasuk rendah yaitu sebesar 0,357.

Korelasi genetik tanaman uji keturunan half-sib Mindi umur 4 tahun menunjukkan korelasi yang positif, yaitu antara tinggi dan diameter batang sebesar 1,126; antara tinggi dan tinggi batang bebas cabang sebesar 1,187; antara tinggi dan bentuk batang sebesar 0,735; antara diameter batang dan tinggi batang bebas cabang sebesar 0,904; antara diameter batang dan bentuk batang sebesar 0,703; dan antara tinggi batang bebas cabang dan bentuk batang sebesar 1,152. Korelasi antar umur pada karakter tinggi dan diameter batang tanaman uji keturunan half-sib Mindi memberikan korelasi yang positif, yaitu pada karakter tinggi berkisar antara 0,814-0,993; sedangkan pada karakter diameter batang berkisar antara 0,976-0,996.

Tingkat serangan penyakit pada batang dan cabang tanaman Mindi umur 4 tahun di Wanagama I menunjukkan variasi yang tidak nyata.



EVALUATION OF HALF-SIB PROGENY TEST
OF MINDI (*Melia azedarach* L.) AT FOUR YEARS AGE
IN WANAGAMA I

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A B S T R A C T

Evaluation of the plant area of half-sib progeny test of Mindi (*M. azedarach* L.) at the age of 4 years had been intended to know : (1) the level of plant's succes, (2) variation of height's growth, stem's diameter, stem's height free of branch, and the stem's shape, (3) the estimate of heritability value for height's characteristic, stem's diameter, stem's height free of branch, and stem's shape, (4) the best family, (5) genetic correlation among height's characteristic, stem's diameter, stem's height free of branch, and stem's shape, (6) interage cor-relation of height's characteristic and stem's diameter, (7) the inten-sity of disease invasion on stem and branch.

The observation had been carried out in the plant area of half-sib progeny test of Mindi PPGM-T83-1992, in the 13th of garden bed, Wanagama I, Gunung Kidul, Yogyakarta ; which consisted of 41 seedlots/families, 5 blocks of randomized complete block design (RCBD), 4 treeplot, using 3x3 meters of plant space.

The observation result had showed that through the age of 4 years, the level of plant's succes had reached 86,59%. There had been a siginificant variation in stem's diameter characteristic and stem's shape, where as in the height's characteristic and stem's height free of branch there had been non significant variation. Families number 070, 090, and 050 came from Kepuharjo and Umbulharjo held the best average value of all observed characteristic. The estimate of family heritability value in stem's diameter characteris-tic had ben moderate as much as 0,470; where as in stem's shape characteristic belonged to low category as much as 0,357.

Genetic correlation of plant of half-sib progeny test of Mindi at 4 years old showed positive correlation i e between the height and stem's diameter as much as 1,126; between the height and stem's height free of branch as much as 1,187; between the height and stem's shape as much as 0,735; between stem's diameter and stem's height free of branch as much as 0,904; between stem's diameter and stem's shape as much as 0,703; and between stem's height free of branch and stem's shape as much as 1,152. Interage correla-tion of height's characteristic and stem's diameter of plant of half-sib progeny test of Mindi provide positive correla-tion i e on height's characteristic about 0,814-0,993, where as on stem's diameter about 0,976-0,996.

The intensity of disease invasion on stem and branch of Mindi plant at 4 years old in Wanagama I indicated non significant variation.