

Genetik Pertumbuhan Awal Uji Klon Jati di Watusipat, Gunungkidul

Genetic of Early Growth of Teak Clonal at Watusipat Trial in Gunungkidul

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Abstract: Teak clonal trial was established at Watusipat, Gunungkidul to obtain best clonal for fast growth in order to increase productivity of privately owned forest of teak (*Tectona grandis*). Tirdty one (31) clonal teak from Thailand and teak forest in Java Island and Muna, Sulawesi Tenggara were tested in this trial. Randomized Complete Block Design, consisting of 5 replications, and 5 tree (clone) per plot were designed in this plot. Data of the teak clonal trial were collected for growth (height and diameter at breast height) in 2 and 4 years old. In view of the variation between clones and genetic variation of growth, the analysis of variance (ANOVA) and genetic parameters were conducted. The results showed that significant differences were found between clones in the trial for height and diameter in 2 or 4 years old. The average of height were 5.10 m in 2 years old and 8.88 m in 4 years old, the average of diameter were 5.86 cm in 2 years old and 9.21 cm in 4 years old. Clonal repeatabilities were low in the trial ($H^2_c=0.07$ for height and $H^2_c=0.08$ for diameter in 2 years old; $H^2_c=0.13$ for height and $H^2_c=0.12$ for diameter in 4 years old). Base on these results, it can be concluded that the breeding program of teak can improve the mean annual increment (MAI) while using clonal selection. Therefore, the main goal for increasing productivity of teak privately owned forest, will be achieved.

Keywords: genetic, clone, teak, variation, growth

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DISKUSI

Ali Mustofa Sidauruk

Pertanyaan: Apakah ada tanaman jati yang saat ini pertumbuhannya cepat dan bisa dipanen di bawah 5 tahun?

Jawaban: Tidak bisa jika dipanen sebelum 5 tahun, karena diameternya masih dibawah 10 cm.