

**PENGARUH VARIASI KELERENGAN DAN APLIKASI MULSA  
TERHADAP PERTUMBUHAN AWAL TANAMAN JATI UNGGUL  
(*Tectona grandis* L.f.) DI WANAGAMA I**

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**INTISARI**

Tanaman yang masih muda membutuhkan pemeliharaan yang intensif seperti pemulsaan untuk mendukung pertumbuhannya agar saat panen mempunyai kualitas kayu tinggi. Kelerengan merupakan faktor lingkungan yang berpengaruh terhadap kualitas tempat tumbuh yang mendukung pertumbuhan tanaman. Penelitian ini bertujuan untuk mengetahui pengaruh variasi kelerengan dan aplikasi mulsa terhadap pertumbuhan awal tanaman jati unggul (*Tectona grandis*) dan kondisi lingkungan mikro di Wanagama I Petak 14.

Penelitian ini dilaksanakan di Hutan Pendidikan Wanagama I Petak 14, Kecamatan Playen, Kabupaten Gunung Kidul. Penelitian ini menggunakan Rancangan Split Plot dengan 2 faktor perlakuan yaitu variasi kelerengan (6% dan 17%) dan aplikasi mulsa (J0G0, J0G1, J0G2, J1G0, J1G1, J1G2, J2G0, J2G1, dan J2G2). Kombinasi perlakuan mulsa dengan 2 jenis mulsa organik yaitu serbuk gergaji kayu jati dan seresah tanaman gamal (*Glyricidia sepium*) sebanyak 1 kg hingga 2 kg.

Hasil penelitian menunjukkan bahwa faktor kelerengan dan aplikasi mulsa tidak mempengaruhi pertumbuhan awal tanaman jati unggul dan populasi makrofauna tanah, tetapi mempengaruhi kelembaban tanah. Peningkatan kelembaban tanah di lahan landai (kelerengan 6%) adalah 16%, sedangkan di lahan miring (kelerengan 17%) adalah 9%. Derajat pH tanah di lahan landai adalah 7,45, sedangkan di lahan miring 7,73. Aplikasi mulsa yang terbaik untuk meningkatkan kelembaban tanah di lahan landai yaitu perlakuan J2G0 (mulsa serbuk gergaji kayu jati 2 kg) (17,4%), J2G1 (mulsa serbuk gergaji kayu jati 2 kg dan seresah gamal 1 kg) (17,52%), dan J2G2 (mulsa serbuk gergaji kayu jati 2 kg dan seresah gamal 2 kg) (17,6%); sedangkan di lahan miring yaitu perlakuan J2G1 (10,31%) dan J2G2 (10,45%). Interaksi faktor kelerengan dengan aplikasi mulsa tidak mempengaruhi pertumbuhan awal tanaman jati unggul dan populasi makrofauna tanah, tetapi mempengaruhi kelembaban tanah. Interaksi lahan landai dengan perlakuan J2G2 meningkatkan kelembaban tanah sebesar 17,6%. Semakin kecil persen kelerengan suatu lahan dan semakin banyak mulsa yang diberikan, maka dapat meningkatkan kelembaban tanah dan menurunkan pH tanah.

Kata kunci : Jati unggul, variasi kelerengan, aplikasi mulsa, mulsa organik.

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## THE EFFECT OF SLOPE VARIATION AND MULCH APPLICATION TO EARLY GROWTH OF SUPERIOR TEAK PLANTS (*Tectona grandis* L.f.) IN WANAGAMA I

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### ABSTRACT

Young trees requires intensive maintenance such as mulching to support its growth in order to the quality of wood is high at harvest. Slope is the environment's factor that can be effected the site quality that supports the growth of plant. The research aims to know the effect of slope variation and mulch application to early growth of superior teak (*Tectona grandis*) and micro-environmental conditions in Wanagama I Section 14<sup>th</sup>.

The research was conducted at the Wanagama's Forest Education I Section 14<sup>th</sup>, Playen District, Sub-Province of Gunung Kidul. The research used Split Plot Design with 2 factors of treatment that were the variation slope (6% and 17%) and the mulch application (J0G0, J0G1, J0G2, J1G0, J1G1, J1G2, J2G0, J2G1, and J2G2). Combination treatment of mulch with 2 organic mulch types that were the teak sawdust and litter *Glyricidia sepium* litter as much as 1 kg to 2 kg.

The result show that the slope factor and mulch application did not effect to early growth of superior teak plants and macro-fauna population, but effect the soil moisture. Increased soil moisture in the slightly land (slope 6%) of 16%, whereas in the inclined land (slope 17%) of 9%. Degree of soil pH on the slightly land of 7.45, whereas in the inclined land of 7.73. The best mulch applications that can to increase the soil moisture in the slightly land that was treatment of J2G0 (teak sawdust mulch 2 kg) (17.4%), J2G1 (teak sawdust mulch 2 kg and *G.sepium* litter 1 kg) (17.52% ), and J2G2 (teak sawdust mulch 2 kg and *G.sepium* litter 2 kg) (17.6%), whereas in the inclined land that was treatment of J2G1 (10.31%) and J2G2 (10.45%). Interaction of slope factor with mulch application did not effect to early growth of superior teak plants and macro-fauna population, but effect to the soil moisture. Interaction of the slightly land with treatment of J2G2 can be increase soil moisture as many 17.6%. The slope with a small percent of the land and the more mulchs given, it can improve soil moisture and lower soil pH.

Keywords: Superior teak, slopes variation, mulchs application, organic mulch.

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