

PERTUMBUHAN DAN PRODUKSI RUMPUT GAJAH (*Pennisetum purpureum* Schumach.) KULTIVAR GAMA UMAMI DI BAWAH NAUNGAN POHON JATI (*Tectona grandis*) KAWASAN HUTAN DESA MEGERI, BLORA, JAWA TENGAH

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INTISARI

Penelitian ini bertujuan untuk mengetahui karakteristik pertumbuhan dan produksi biomassa rumput gajah (*Pennisetum purpureum*) kultivar Gama umami di bawah naungan tanaman pohon jati (*Tectona grandis*) kawasan hutan Desa Megeri, Kabupaten Blora, Jawa Tengah. Rumput ditanam dengan menggunakan setek batang berukuran 25 cm dan ditanam dengan kemiringan 45° pada plot ukuran 1 x 3 meter. Penelitian dilakukan dengan menggunakan metode uji beda dua mean (*T-test*) yang terdiri dari 2 perlakuan yaitu naungan dan tanpa naungan (kontrol) dengan enam kali pengulangan. Pemeliharaan dilakukan selama 14 minggu dengan penambahan pupuk NPK 400 kg/ha/tahun dan urea 150 kg/ha/tahun. Dilakukan pengukuran terhadap tinggi tanaman, panjang daun, lebar daun, panjang *collar* pertama, jumlah tunas, dan diameter batang setiap 2 minggu selama masa pemeliharaan. Perhitungan produksi rumput total dan masing-masing bagian daun dan batang dilakukan setelah pemanenan. Berdasarkan hasil pengamatan, tidak terdapat perbedaan yang signifikan terhadap karakteristik pertumbuhan panjang dan lebar daun, panjang *collar* pertama, jumlah tunas, dan diameter batang antara perlakuan. Akan tetapi, rumput Gama umami yang ditanam tanpa naungan memiliki karakteristik pertumbuhan tinggi tanaman lebih tinggi daripada rumput yang ditanam di bawah naungan tanaman pohon jati. Produksi total biomassa rumput Gama umami yang ditanam tanpa naungan (137 ton/ha) lebih tinggi daripada yang ditanam di bawah naungan (98 ton/ha) dan produksi BK rumput Gama umami yang ditanam tanpa naungan (30,6 ton/ha) lebih tinggi daripada yang ditanam di bawah naungan (19,4 ton/ha). Di sisi lain, persentase produksi biomassa daun rumput Gama umami di bawah naungan (33,97%) lebih tinggi dibandingkan dengan rumput Gama umami yang ditanam tanpa naungan (22,04%). Berdasarkan pertumbuhan rumput Gama umami menunjukkan bahwa morfologi pertumbuhan daun, jumlah tunas, dan diameter batang dapat tumbuh di bawah naungan pohon jati. Namun, produksi biomassa, BK, dan tinggi tanaman rumput Gama umami yang ditanami di bawah naungan lebih rendah daripada yang ditanam tanpa naungan.

Kata kunci: Hutan Blora, Naungan, Pohon jati, Rumput gajah, Silvopastura

GROWTH AND PRODUCTION OF NAPIER GRASS (*Pennisetum purpureum* Schumach.) CULTIVAR GAMA UMAMI UNDER TEAK TREE (*Tectona grandis*) SHADE IN THE FOREST AREA OF MEGERI VILLAGE, BLORA, CENTRAL JAVA

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ABSTRACT

This study aims to determine the growth characteristics and biomass production of napier grass (*Pennisetum purpureum*) cultivar Gama Umami under teak tree shade in the forest area of Megeri Village, Blora Regency, Central Java. The grass was cultivated using 25 cm of stem cutting and planted with a 45° on a 1 x 3 m plot. The research was conducted using T-test method consisting of 2 treatments under teak tree and non under teak tree (control) with six replications. Cultivation was carried out for 14 weeks with the addition of NPK fertilizer 400 kg/ha/year and urea fertilizer 150 kg/ha/year. Measurements were taken of plant height, leaf length, leaf width, first collar length, number of shoots, and stem diameter every 2 weeks during the cultivation period. Calculation of total grass production and each part of the leaves and stems was done after harvesting. The results showed that there were no significant differences in leaf length and width, length of first collar, number of shoots, and stem diameter among treatments, except the change of plant height. The plant height in Gama umami grass cultivated without shading grows significantly more than that under the shade. The total biomass production of grass non under teak tree (137,2 ton/ha) was also higher than that under the shade (98,9 ton/ha) and Dry Matter production of grass non under teak tree (30,6 ton/ha) was also higher than that under the shade (19,4 ton/ha). On the other hand, the percentage of leaf biomass production under the shade (33,97%) was higher than that without shading (22,04%). Based on the growth of Gama umami grass, it shows that the morphology of leaf growth, number of shoots, and stem diameter can grow under the shade of teak trees. However, biomass production, BK production, and plant height of Gama umami grass under the shade were lower than that without shading.

Key words: Blora forest, Shade, Teak tree, Napier grass, Silvopasture