

**MORFOLOGI, PRODUKSI BIOMASSA DAN KANDUNGAN NUTRIEN
RUMPUT GAJAH KULTIVAR GAMA UMAMI DAN ZANZIBAR
(*Pennisetum purpureum*) DI KAWASAN HUTAN JATI DESA
MEGERI, KRADENAN, BLORA, JAWA TENGAH**

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INTISARI

Penelitian ini bertujuan untuk mengetahui karakteristik morfologi dan nilai nutrisi kultivar rumput gajah yang ditanam di dataran rendah desa Megeri, Kabupaten Blora. Terdapat 2 kultivar rumput gajah yang digunakan yaitu *Pennisetum purpureum* cv. Gama Umami (GU) dan *Pennisetum Purpureum* cv. Zanzibar (ZB). Rumput ditanam dengan menggunakan stek batang dan dipelihara selama 4 bulan menggunakan metode Rancangan Acak Lengkap (RAL) dengan 4 kali pengulangan setiap kultivar. Dosis pupuk yang digunakan yaitu pupuk NPK 400 kg/ha/tahun dan Urea 150 kg/ha/tahun. Selama masa pemeliharaan dilakukan pengamatan karakteristik morfologi meliputi tinggi tanaman, panjang daun, lebar daun, diameter batang, dan jumlah tunas. Setelah 4 bulan, rumput gajah dilakukan pemanenan untuk dihitung produksi biomassa (berat segar) dan dianalisis proksimat untuk mengetahui kandungan bahan kering, bahan organik, protein kasar, serat kasar, dan lemak kasar. Hasil pengamatan kemudian dilakukan analisis statistik dengan menggunakan R-software versi 4.2.2. Kultivar GU memiliki tinggi tanaman, panjang daun, lebar daun, diameter batang, dan jumlah tunas lebih tinggi daripada kultivar ZB. Hal ini diikuti dengan hasil produksi biomassa (berat segar) pada kultivar GU (6,15 kg/m²) lebih tinggi dibandingkan kultivar ZB (3,93 kg/m²). Produksi segar kultivar GU signifikan ($P < 0,05$) lebih tinggi dibandingkan kultivar ZB. Berdasarkan hasil analisis kandungan nutrient, protein kasar (PK) kultivar ZB (16,95 %) lebih tinggi dibandingkan kultivar GU (14,89 %). Terdapat perbedaan signifikan ($P < 0.05$) pada nilai protein kasar antara dua kultivar, kultivar ZB memiliki kandungan protein kasar lebih tinggi dibandingkan kultivar GU. Akan tetapi, kandungan serat kasar kultivar ZB (33,28 %) lebih tinggi dibandingkan kultivar GU (29,82 %). Hasil analisis menunjukkan kultivar GU memiliki serat kasar lebih rendah secara signifikan ($P < 0.05$) dibandingkan dengan kultivar ZB. Berdasarkan karakteristik morfologi, produksi biomassa dan nilai nutrient, rumput gajah kultivar GU memiliki performa yang lebih baik di Kawasan hutan jati desa megeri Blora dibandingkan kultivar ZB.

(Kata kunci: Gama Umami, Zanzibar, morfologi, nutrisi, adaptasi, pertumbuhan)

**MORPHOLOGY, BIOMASS PRODUCTION AND NUTRIENT CONTENT
OF GAMA UMAMI AND ZANZIBAR ELEPHANT GRASS (*Pennisetum
purpureum*) IN TEAK FOREST AREA IN MEGERI VILLAGE,
KRADENAN, BLORA, CENTRAL JAWA**

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ABSTRACT

The aimed of this research was to determine the morfological characteristics and nutritional value of elephant grass cultivar planted in the lowlands of Megeri Village, Blora Regency. There are 2 cultivar of elephant grass used, namely *Pennisetum purpureum* cv. Gama Umami (GU) and *Pennisetum Purpureum* cv. Zanzibar (ZB). Grass was planted using stem cuttings and maintained for 4 months using a completely randomized design (CRD) with 4 repetitions for each cultivar. The dosage of fertilizer used is NPK fertilizer 400 kg/ha/year and Urea 150 kg/ha/year. During the maintenance period, morphological characteristics were observed including plant height, leaf length, leaf width, stem diameter, and number of shoots. After 4 months, elephant grass was harvested to calculate biomass production (fresh weight) and proximate analysis to determine dry matter, organic matter, crude protein, crude fiber and crude fat content. The results of the observations were then carried out statistical analysis using R-software version 4.2.2. The GU cultivar had higher plant height, leaf length, leaf width, stem diameter, and number of shoots than the ZB cultivar. This was followed by the production of biomass (fresh weight) in the GU cultivar (6.15 kg/m²) which was higher than the ZB cultivar (3.93 kg/m²). Fresh production of the GU cultivar was significantly ($P < 0.05$) higher than that of the ZB cultivar. Based on the analysis of nutrient content, the crude protein (PK) of the ZB cultivar (16.95%) was higher than that of the GU cultivar (14.89%). There was a significant difference ($P < 0.05$) in the crude protein value between the two cultivars, the ZB cultivar had a higher crude protein content than the GU cultivar. However, the crude fiber content of the ZB cultivar (33.28%) was higher than that of the GU cultivar (29.82%). The results of the analysis showed that the GU cultivar had significantly lower crude fiber ($P < 0.05$) than the ZB cultivar. Based on morphological characteristics, biomass production and nutrient value, the GU cultivar elephant grass has better performance in the teak forest area of Megeri Blora village than the ZB cultivar.

(Key Words: Gama Umami, Zanzibar, morphological, nutritive, adaptation, growth)