PERTUMBUHAN, PRODUKSI BIOMASSA, DAN KANDUNGAN NUTRIEN RUMPUT PAHIT (*Axonopus compressus*) PADA LEVEL NAUNGAN BERBEDA

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INTISARI

Tujuan dari penelitian ini yaitu mengetahui pengaruh naungan terhadap pertumbuhan, produksi biomassa, dan kandungan nutrien rumput pahit (*Axonopus compressus*). Penelitian dilakukan selama empat bulan di kebun koleksi dan Laboratorium Hijauan Makanan Ternak dan Pastura Fakultas Peternakan Universitas Gadjah Mada. Sebidang tanah dengan luas 8 x 2 m^2 dibagi menjadi 2 blok sebagai perlakuan naungan yang berbeda yaitu tanpa naungan dan menggunakan naungan (50% paranet). Setiap blok dibagi menjadi 3 petak masing-masing berukuran 1 x 1 m^2 yang ditanami empat bibit rumput pahit (*Axonopus compressus)* yang telah disemai di dalam *polybag* selama 21 hari dengan jarak tanam 60 x 60 cm. Pemanenan dilakukan pada umur 60 hari setelah tanam. Variabel yang diukur meliputi pertumbuhan (tinggi tanaman, panjang tanaman, jumlah daun, panjang daun, dan lebar daun), produksi biomassa (berat segar, bahan kering, dan bahan organik), dan kandungan nutrien (bahan kering, bahan organik, protein kasar, lemak kasar, dan serat kasar). Data yang diperoleh dianalisis menggunakan *T-test* dengan bantuan *software* personal komputer *Statistical Product and Service* (SPSS). Hasil penelitian menunjukkan naungan 0% lebih tinggi (P<0,05) pada jumlah daun (1283,33 helai), bahan kering (33,11%), bahan organik (72,91%), serat kasar (24,74%), bahan ekstrak tanpa nitrogen (36,71%), *total digestible nutrients* (49,07%), produksi bahan kering (4,21 ton/ha), dan produksi bahan organik (3,07 ton/ha), namun lebih rendah (P<0,05) pada panjang tanaman (70,69 cm), panjang daun (6,53 cm), lebar daun (1,34 cm), dan protein kasar (10,72%). Berdasarkan penelitian dapat disimpulkan bahwa rumput pahit (*Axonopus compressus)* yang ditanam pada naungan 50% masih dapat tumbuh dan berproduksi menghasilkan biomassa serta nutrien yang baik.

Kata Kunci: *Axonopus compressus*, Kandungan Nutrien, Naungan, Pertumbuhan, Produksi Biomassa

GROWTH, BIOMASS PRODUCTION, AND NUTRIENT CONTENT OF *AXONOPUS COMPRESSUS* ON THE DIFFERENT SHADE LEVEL

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ABSTRACT

The purpose of this study was to determine the effect of shading on growth, biomass production and nutrient content of the carpet grass (*Axonopus compressus).* This study was conducted for four months located in field facilities and Laboratory of Forage and Pasture Science Faculty of Animal Science Universitas Gadjah Mada. A field with total area about 8 x 2 m^2 divided into two blocks as the treatments different shade namely without using shade and using shade (50% paranet). Each block divided into three plots with 1 x 1 m^2 plot size were planted by four *Axonopus compressus* which had been sown for 21 days in polybags and then planted with a spacing 60 cm x 60 cm. *Axonopus compressus* was harvested 60 days after planting. Variables observed were plant growth (plant height, plant length, number of leaves, leaf length, and leaf width), biomass production (fresh weight, dry matter and organic matter) and nutrient content (dry matter, organic matter, crude protein, crude fat and crude fiber). The data obtained were analyzed by *T-test* by using *Statistical Product and Service* (SPSS) personal computer software. The results showed that carpet grass planted under 0% of shading was higher (P<0,05) than 50% of shading on total leaves (1283,33 sheets), dry matter (33,11%), organic matter (72,91%), crude fiber (24,74%), nitrogen free extract (36,71%), *total digestible nutrients* (49,07%), production of dry matter (4,21 ton/ha) and production of organic matter (3,07 ton/ha), but was lower (P<0,05) on plant length (70,69 cm), leaf length (6,53 cm), leaf width (1,34 cm), and crude protein (10,72%). Based on the study it can be concluded that carpet grass (*Axonopus compressus)* that was planted under 50% shade level can still growth and produce good biomass and nutrients.

Keywords: *Axonopus compressus,* Shade, Growth, Biomass production, Nutrient content