

PENGARUH LEVEL NAUNGAN TERHADAP PERTUMBUHAN, PRODUKSI, DAN KANDUNGAN NUTRIEN TANAMAN BAYAMAN (*Asystasia gangetica*)

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INTISARI

Penelitian ini bertujuan untuk mengetahui pertumbuhan, produksi biomassa, dan kandungan nutrisi tanaman bayaman (*Asystasia gangetica*) dengan berbagai level naungan. Penelitian dilakukan selama tiga bulan di kebun koleksi dan Laboratorium Hijauan Makanan Ternak dan Pastura, Fakultas Peternakan, Universitas Gadjah Mada. Sebidang tanah dengan luas 25 x 5 m² dibagi menjadi tiga blok sebagai perlakuan level naungan yaitu 0, 50, dan 75%. Perlakuan level naungan 0% tanpa menggunakan naungan paranet dan untuk level naungan 50 dan 75% menggunakan paranet dengan kerapatan 50 dan 75%. Pengukuran intensitas cahaya menggunakan luxmeter. Setiap blok dibagi menjadi tiga plot masing-masing berukuran 1 x 1 m² yang ditanami empat bibit tanaman bayaman berumur 21 hari dalam polybag dengan jarak tanam 40 x 40 cm mengikuti rancangan acak lengkap pola searah. Pemanenan dilakukan pada 50 HST dengan variabel pertumbuhan, produksi, dan kandungan nutrisi. Hasil penelitian menunjukkan level naungan 0% lebih tinggi ($P < 0,05$) pada jumlah daun (410,08 helai), BK (14,55%), BO (83,85%), SK (24,47%), produksi segar (17,20 ton/ha), produksi BK (2,50 ton/ha), produksi PK (0,42 ton/ha), serta produksi TDN (1,44 ton/ha); pada level naungan 50% penutupan lahan lebih rendah (51,92%, $P < 0,05$); dan pada level naungan 75% lebih tinggi ($P < 0,05$) pada panjang tanaman (63,33 cm), panjang daun (10,06 cm), lebar daun (3,50 cm), dan PK (22,46%). Dari penelitian ini dapat disimpulkan bahwa tanaman bayaman yang ditanam pada naungan 0% memiliki pertumbuhan, produksi biomassa, dan kandungan nutrisi terbaik.

Kata kunci: *Asystasia gangetica*, Kandungan nutrisi, Level naungan, Pertumbuhan, Produksi biomassa

THE EFFECT OF SHADE LEVELS ON THE GROWTH, PRODUCTION, AND NUTRIENT CONTENT OF *Asystasia gangetica*

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ABSTRACT

The objective of this research was to analyze the effect of various shading levels on *Asystasia gangetica* growth, biomass production, and nutrient content. This research was conducted for three months located in forage facilities and Laboratory of Forage and Pasture Science Faculty of Animal Science Universitas Gadjah Mada. A field with total area about 25 x 5 m² divided into three blocks as the treatments of shading levels were 0, 50, and 75%. Each block divided into three plots with 1 x 1 m² plot size were planted by four *Asystasia gangetica* 21 days old seeds with spacing 40 x 40 cm following a One-way completely randomized design. *Asystasia gangetica* was harvested 50 days after planting. Variables observed were plant growth, biomass production, nutrient content, and land cover. The data were analyzed with analysis of variance and the differences between mean were tested using Duncan's multiple range test (DMRT). The result showed that shading levels significantly affected ($P < 0.05$) was higher on total leaves (410.08 cm), DM (14.55%), OM (83.85%), CF (24.47%), fresh production (17.20 ton/ha), DM production (2.50 ton/ha), CP production (0.42 ton/ha), TDN production (1.44 ton/ha) at 0% shade level. Land cover (51.92%) was lower at 50% shade level. Plant length (63.33 cm), leaves length (10.06 cm), leaves wide (3.50 cm), and CP (22.46%) at 75% shade level. Based on the results, it can be concluded that *Asystasia gangetica* was planted at 0% shade level had the best growth, biomass production, nutrient content.

Keywords: *Asystasia gangetica*, Shade levels, Growth, Biomass production, Nutrient content