KARAKTERISTIK MORFOLOGI DAN PRODUKSI BIOMASSA TANAMAN CHICORY (*Cichorium intybus* L.) DENGAN KERAPATAN TANAM YANG BERBEDA DI YOGYAKARTA

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INTISARI

Penelitian ini bertujuan untuk mengetahui karakteristik morfologi, produksi biomassa dan kandungan nutrien *Cichorium intybus* var. chico pada kerapatan tanam yang berbeda selama fase vegetatif. Penelitian ini dilakukan di Fakultas Peternakan Universitas Gadjah Mada, Yogyakarta. Materi yang digunakan adalah biji *Cichorium intybus* var. chico yang ditanam pada 9 plot ukuran 1 x 1,5 m^2 dengan cara disebar bijinya dengan perlakuan kerapatan tanam yang berbeda yaitu sebesar 2, 3 dan 4 g/m^2. Masing-masing perlakuan mendapat pengulangan 3 kali. Tiap plot diambil sampel sebanyak 5 tanaman secara acak untuk diukur pertumbuhan vegetatif meliputi tinggi dan panjang tanaman, jumlah dan lebar daun. Produksi segar, bahan kering (BK), bahan organik (BO) dan kandungan nutrien (BK, BO dan SK) diukur tiap plot. Data dianalisis variansi sesuai rancangan acak lengkap pola searah dan dilanjutkan dengan uji *Duncan's New Multiple Range Test* (DMRT) apabila diperoleh hasil signifikan. Hasil penelitian menunjukkan bahwa tanaman dengan kerapatan tanam 2 dan 3 g/m^2 memiliki tinggi tanaman, panjang tanaman dan jumlah daun lebih tinggi ($P<0,05$) dibanding kerapatan tanam 4 g/m^2. Produksi tertinggi tanaman *Cichorium intybus* var. chico yaitu pada kerapatan tanam 3 g/m^2 yang dapat menghasilkan produksi segar, BK dan BO masing-masing 180,75 ton/ha/tahun, 17,37 ton/ha/tahun dan 14,15 ton/ha/tahun, serta kandungan 9,82±1,12% BK dan 81,48±0,76% BO. Berdasarkan penelitian, dapat disimpulkan bahwa tinggi tanaman, panjang tanaman dan jumlah daun menurun pada kerapatan tanam 3 g/m^2. Tidak ada perbedaan pada kadar bahan kering, kadar bahan organik dan serat kasar. Produksi segar, bahan kering dan bahan organik optimal meningkat pada kerapatan tanam 3 g/m^2.

Kata kunci: *Cichorium intybus* var. chico, Karakteristik morfologi, Produksi biomassa, Kandungan nutrien, Kerapatan tanam.

MORPHOLOGICAL CHARACTERISTICS AND BIOMASS PRODUCTION OF CHICORY (*Cichorium intybus* L.) PLANTS WITH DIFFERENT PLANTING DENSITIES IN YOGYAKARTA

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ABSTRACT

This study was aimed to know the morphological characteristics, biomass production and nutrient content of *Cichorium intybus* var. chico at different planting densities during the vegetative phase. This study was conducted at the Faculty of Animal Science, Gadjah Mada University, Yogyakarta. The material used was *Cichorium intybus* var. chico seeds planted in 9 plots measuring 1 x 1.5 m^2 by spreading the seeds with different planting density treatments: 2, 3 and 4 g/m^2. Each treatment got 3 repetitions. Each plot was sampled as many as 5 plants at random to measure vegetative growth including plant height and length, leaf number and leaf width. Fresh, dry matter (DM), organic matter (OM) production and nutrient contents (DM, OM and CF) were measured for each plot. Data were analyzed by analysis of variance allowed a completely randomized design with a one way pattern and continued with *Duncan's New Multiple Range Test* (DMRT) if significant results were obtained. The results showed that the plants with planting densities of 2 and 3 g/m^2 had higher plant height, plant length and number of leaves ($P<0.05$) than the planting density of 4 g/m^2. The highest production of *Cichorium intybus* var. chico was at a planting density of 3 g/m^2 which was able to produce fresh, DM and OM production respectively 180.75 tons/ha/year, 17.37 tons/ha/year and 14.15 tons/ha/year, as well as 9.82±1.12% DM and 81.48±0.76% OM. Based on the research, it can be concluded that plant height, plant length and number of leaves decreased at a planting density of 3 g/m^2. There is no difference in dry matter, organic matter and crude fiber contents. The best production of biomass production is at 3 g/m^2 planting density.

Key words: *Cichorium intybus* var. chico, Morphological characteristic, Biomass production, Nutrient content, Planting density.