

PENGARUH PENGGUNAAN PUPUK KANDANG KAMBING TERHADAP MORFOLOGI, PRODUKSI BIOMASSA, DAN KANDUNGAN NUTRIEN TANAMAN JAGUNG (*Zea mays*)

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INTISARI

Penelitian ini bertujuan untuk mengetahui morfologi, produksi biomassa, dan kandungan nutrisi tanaman jagung (*Zea mays*) dengan pupuk kandang kambing. Plot tanah ukuran 2 x 3m sebanyak 6 plot secara acak dibagi menjadi 2 perlakuan pupuk dengan 3 ulangan yaitu perlakuan tanpa dan dengan pupuk kandang kambing. Bibit jagung varietas Pioneer 36® ditanam dalam plot dengan jarak tanam 70 x 20cm. Tanaman jagung dipanen pada umur 70 hari setelah tanam (hst). Variabel morfologi tanaman yang diukur adalah tinggi tanaman, panjang tanaman, jumlah daun, panjang daun, dan lebar daun. Kandungan nutrisi yang diukur adalah komposisi kimia meliputi kadar bahan kering, kadar bahan organik, dan kadar protein kasar. Variabel produksi yang diukur adalah produksi segar, produksi bahan kering, produksi bahan organik dan produksi protein kasar. Data yang diperoleh dianalisis dengan uji *T-test*. Hasil penelitian menunjukkan bahwa perlakuan dengan pupuk kandang kambing berpengaruh nyata ($P < 0,05$) terhadap tinggi tanaman, panjang tanaman, jumlah daun, lebar daun, panjang daun, produksi segar, produksi bahan kering, produksi bahan organik, dan produksi protein kasar, tetapi berpengaruh tidak nyata ($P > 0,05$) terhadap kadar bahan kering, kadar bahan organik, dan kadar protein kasar. Berdasarkan hasil penelitian dapat disimpulkan bahwa penggunaan pupuk kandang kambing dapat meningkatkan morfologi tanaman dan produksi biomassa tanaman jagung, namun tidak pada kandungan nutrisi tanaman jagung.

Kata kunci: *Zea mays*, Pupuk kandang kambing, Morfologi, Produksi biomassa, Kandungan nutrisi

THE EFFECT OF THE USE OF GOAT MANURE ON MORPHOLOGY, BIOMASS PRODUCTION, AND NUTRIENT CONTENT OF CORN (*Zea mays*)

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ABSTRACT

This research aimed to determine the morphology, biomass production and nutrient content of corn plants (*Zea mays*) with goat manure usage. Six plots of land measured 2 x 3 m were randomly divided into 2 fertilizer treatments with 3 replications, namely treatments without and with goat manure. Pioneer 36® corn seeds are planted in plots with a 70 x 20cm space. Corn plants are harvested at 70 days after planting (DAT). The plant morphology variables measured were plant height, plant length, number of leaves, leaf length and leaf width. The nutrient content measured the chemical composition, dry matter content included, organic matter content and crude protein content. The production variables measured were fresh production, dry material production, organic material production and crude protein production. The data obtained were analyzed using the *T-test*. The results showed that treatment with goat manure had a significant effect ($P < 0.05$) on plant height, plant length, number of leaves, leaf width, leaf length, fresh production, dry matter production, organic matter production, and crude protein production, but had no significant effect ($P > 0.05$) on dry matter content, organic matter content and crude protein content. Based on the research results, the usage of goat manure can improve plant morphology and biomass production of corn plants, but not the nutrient content of corn plants.

Kata kunci: *Zea mays*, Goat manure, Morphology, Biomass production, Nutrient content