

**PENGARUH PEMBERIAN PUPUK HIJAU DAN PUPUK KANDANG  
SERTA LAMA PENYINARAN TERHADAP PERTUMBUHAN  
VEGETATIF TANAMAN ALFALFA (*Medicago sativa* L.)**

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**INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh pemberian pupuk hijau dan pupuk kandang serta lama penyinaran terhadap pertumbuhan vegetatif tanaman alfalfa (*Medicago sativa* L.). Penelitian ini menggunakan rancangan acak lengkap pola faktorial  $3 \times 3$  dengan tiga pengulangan untuk setiap perlakuan. Faktor pertama adalah perlakuan jenis pupuk yang terdiri atas: pupuk hijau dan pupuk kandang. Faktor kedua merupakan perlakuan lama penyinaran yang terdiri atas: C0 (tanpa penambahan cahaya lampu), C4 (dengan penambahan cahaya lampu selama empat jam), dan C8 (dengan penambahan cahaya lampu selama delapan jam). Panen dilakukan pada umur 11 MST. Peubah yang diukur adalah tinggi tanaman, produksi segar, kandungan bahan kering, kandungan bahan organik, dan kandungan protein kasar. Data vegetatif, pertumbuhan, produksi, dan kandungan dianalisis menggunakan software SPSS 16. Apabila terdapat perbedaan antar perlakuan, dilanjutkan dengan *Duncan multiple range test*. Hasil penelitian ini menunjukkan bahwa perlakuan perbedaan pupuk tidak berpengaruh nyata terhadap pertumbuhan tinggi tanaman. Perlakuan perbedaan pupuk dan lama penyinaran juga tidak berpengaruh nyata terhadap jumlah cabang tanaman alfalfa, produksi bahan segar, produksi bahan kering, kandungan bahan kering, kandungan BO dan kandungan PK tanaman alfalfa. Adapun perlakuan lama penyinaran berpengaruh nyata ( $P < 0,05$ ) terhadap kandungan BK tanaman alfalfa. Berdasarkan hasil penelitian ini, dapat disimpulkan bahwa perlakuan perbedaan pupuk dan lama penyinaran tidak berpengaruh nyata terhadap pertumbuhan vegetatif tanaman alfalfa. Perlakuan lama penyinaran selama 16 jam sudah menunjukkan peningkatan kandungan bahan kering tanaman alfalfa yang signifikan.

Kata kunci: Lama penyinaran, *Medicago sativa*, Pupuk hijau, Pupuk Kandang.

**THE EFFECT OF GIVING GREEN FERTILIZER AND MANURE AS  
WELL AS LIGHTING DURATION TO VEGETATIVE GROWTH OF  
ALFALFA PLANT (*Medicago sativa* L.)**

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**ABSTRACT**

This study aimed to determine the effect of green fertilizer and manure with different lighting duration on vegetative growth of alfalfa (*Medicago sativa* L.). This study used a completely randomized design of 3 x 3 factorial patterns with three replications for each treatment. First factor was the type of fertilizer treatment consisting of: green manure and animal manure. Second factor was the photoperiod treatment consisting of: C0 (without addition), C4 (with four hours lighting addition), and C8 (with eight hours lighting addition). Harvest due was set after 11 (MST). The observed variables were plant height, fresh production, dry matter, organic matter, and crude protein contents. Vegetative growth data, growth, production, and nutrient content were analyzed using SPSS. Any differences among treatments were continued using Duncan multiple range test. The result showed that fertilizer treatment showed a non significant effect to the height of plant. Fertilizer treatment and photoperiod also showed non significant result to number of branch, fresh matter production, dry matter production, dry matter, organic matter, and crude protein content of Alfalfa. Meanwhile the lighting duration had a significant effect on dry matter content of alfalfa. It can be concluded that fertilizer and lighting duration treatment were not affected significant on vegetative growth of alfalfa. Lighting duration treatment for 16 hour showed an increasing in dry matter content of alfalfa significantly.

**Keywords:** Lighting duration, *Medicago sativa*, green manure, animal manure.