

PENGARUH DOLOMIT DAN LAMA PENYINARAN TERHADAP LUAS DAN
KEHIJAUAN DAUN TANAMAN ALFALFA (*Medicago sativa* L.)
PADA TANAH REGOSOL

Monalisa Lau Rendra
12/336704/PT/06415

INTISARI

Tujuan dari penelitian ini adalah untuk mengetahui pengaruh pemberian dolomit dan penyinaran terhadap nilai luas dan kehijauan daun tanaman alfalfa. Penelitian dilaksanakan di rumah kaca Laboratorium Ilmu Hijauan Makanan Ternak dan Pastura Fakultas Peternakan Universitas Gadjah Mada dari bulan Mei sampai September 2015. Penelitian ini menggunakan Rancangan Acak Lengkap pola Faktorial 3 x 3 dengan dua faktor perlakuan dan empat ulangan. Faktor pertama adalah pemberian dolomit dengan 3 level (D0= tanpa dolomit, D1= dolomit 6t/ha atau 90 g/polybag, dan D2= dolomit 12 t/ha atau 180 g/polybag). Faktor kedua adalah penyinaran dengan 3 level perlakuan (C0= intensitas 12 jam, C1= intensitas cahaya 14 jam, dan C2= intensitas cahaya 16 jam). Variabel yang diamati adalah luas dan nilai kehijauan daun alfalfa. Luas daun diukur menggunakan metode gravimetri dan kehijauan daun diukur menggunakan bagan warna daun. Hasil pengamatan dianalisis dengan sidik ragam, dan dilakukan uji lanjut DMRT 5% untuk hasil yang berpengaruh nyata. Hasil penelitian menunjukkan bahwa tidak ada interaksi antara perlakuan lama penyinaran dan penambahan dolomit terhadap nilai luas daun alfalfa. Perlakuan penyinaran 14 jam berpengaruh nyata ($P < 0,05$) terhadap nilai kehijauan daun pada umur 4, 6, dan 8 minggu setelah tanam (MST) sedangkan perlakuan penambahan dolomit 180 g berpengaruh nyata ($P < 0,05$) terhadap nilai kehijauan daun pada umur 6 MST. Terdapat interaksi antara perlakuan penambahan dolomit dan penyinaran terhadap nilai kehijauan daun pada umur 6 MST. Berdasarkan hasil penelitian dapat disimpulkan bahwa penyinaran 14 jam merupakan perlakuan terbaik terhadap nilai kehijauan daun tanaman alfalfa (*Medicago sativa* L.) pada umur 4, 6, dan 8 MST. Luas daun tanaman alfalfa tidak dipengaruhi oleh penambahan dolomit dan penyinaran.

(Kata Kunci: Alfalfa, Dolomit, Lama Penyinaran, Luas Daun, Kehijauan Daun)

THE EFFECT OF DOLOMITE AND PHOTOPERIOD ON LEAF AREA AND LEAF GREENNESS OF ALFALFA (*Medicago sativa* L.) ON THE REGOSOL SOIL

Monalisa Lau Rendra
12/336704/PT/06415

ABSTRACT

This study aimed to determine the effect of dolomite and different photoperiod on leaf area and leaf greenness of alfalfa. This study was conducted in greenhouse belong to Laboratory of Forage and Pasture Science Laboratory of Faculty of Animal Science of Universitas Gadjah Mada from May to September 2015. This study was designed using Completely Randomized Design Factorial pattern 3 x 3 with two factors of treatment and four replications. The first factor was 3 dolomite levels (D0 = without dolomite, D1 = 6 t/ha dolomite or 90 g/polybag, and D2 = 12 t/ha dolomite or 180 g/polybag). The second factor was 3 levels of photoperiod (C0 = 12 hr irradiation, C1 = 14 hr irradiation, and C2 = 16 hr irradiation). The variables observed were leaf area and leaf greenness of alfalfa. Leaf areas were measured with gravimetri method and leaf greenness with leaf color chart. The data was analyzed by analysis of variance, and 5% Duncan Multiple Range Test. The result showed that there was no interaction between photoperiod and dolomite addition to the leaf area of alfalfa. The irradiation of 14 hours had significant effect ($P < 0,05$) on leaf greenness at age 4, 6, and 8 weeks after planting, while the addition of 180 g dolomite significantly ($P < 0,05$) to leaf greenness at age 6 weeks after planting. There was an interaction ($P < 0,05$) between dolomite treatment and irradiation on leaf greenness alfalfa aged of 6 weeks after planting. Based on the result it can be concluded that irradiation of 14 hours was the best treatment on leaf greenness at aged 4, 6, and 8 weeks after planting. The best leaf greenness of alfalfa was obtained at 14 hours and 16 hours of photoperiod without dolomite. Leaf area of alfalfa was unaffected by dolomite and photoperiod.

(Key word: Alfalfa, Dolomite, Photoperiod, Leaf area, Leaf greenness)