

ABSTRACT

GILANG KARISMA FEBRITIARA. A.1210174. Growth and Production Responses of Red Lettuce (*Lactuca sativa* L.) to Different Frequency of Cattle Urine Administration and Rates of Urea Fertilizer. Under immediate supervision of Oktavianus and Setyono.

This study was aimed at assessing the growth and production responses of red lettuce (*Lactuca sativa* L.) to different frequency of cattle urine administration and rates of urea fertilizer. The study was conducted at the Agrotechnology Trial Farm, Faculty of Agriculture, Djuanda University, Bogor from January to February 2019. A factorial completely randomized design with 2 factors was used. Each factor consisted of 4 levels and 3 replicates were allocated into each level making up 48 experimental units. In each experimental unit, 3 polybags of lettuce plants were used making up 144 observation units. Frequency of cattle urine administration consisted of no cattle urine administration (U0), one cattle urine administration at 5 days after planting (DAP) (U1), 2 times cattle urine administration at 5 and 10 DAP (U2), and 3 times cattle urine administration at 5, 10, and 15 DAP (U3). Urea fertilizer rates consisted of 0% (N0), 50% (N1), 100% (N2), and 150% (N3). Results showed that frequency of cattle urine administration and rates of urea fertilizer significantly affected the growth and production of red lettuce. Frequency of cattle urine administration of U3 significantly increase leaf width, leaf area, biomass fresh weight, and root fresh weight. Urea fertilizer rate of 100% (N2) significantly increased leaf width. It was also found that, compared to other treatments, 3 times cattle urine administration gave better results.

Key words: *frequency, Lactuca sativa, cattle urine.*

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ABSTRACT

Penelitian ini bertujuan untuk mengetahui respon pertumbuhan dan produksi tanaman selada merah (*Lactuca sativa* L.) pada perbedaan frekuensi pemberian urin sapi dan dosis pupuk urea. Penelitian ini dilaksanakan pada bulan Januari sampai dengan Februari 2019 di lahan percobaan Agroteknologi Universitas Djuanda Bogor. Penelitian ini menggunakan rancangan acak lengkap (RAL) faktorial yang terdiri dari 2 faktor masing-masing dengan 4 taraf perlakuan. Setiap perlakuan menggunakan tiga ulangan sehingga terdapat 48 satuan percobaan, setiap satuan percobaan menggunakan 3 polybag sehingga terdapat 144 satuan amatan. Taraf-teraf dari frekuensi pemberian urin sapi yaitu tanpa pemberian urin sapi (U0), 1 kali pemberian pada 5 HST (U1), 2 kali pemberian pada 5 dan 10 HST (U2), 3 kali pemberian pada 5,10, dan 15 HST (U3). Sementara itu taraf-teraf dari dosis pupuk urea adalah 0% (N0), 50% (N1), 100% (N2), 150% (N3). Hasil penelitian menunjukkan bahwa frekuensi pemberian urin sapi dan dosis pupuk urea berpengaruh terhadap pertumbuhan dan produksi tanaman selada merah. Frekuensi pemberian urin sapi U3 nyata meningkatkan lebar daun, luas daun, bobot segar berangkasan, dan bobot segar akar. Dosis pupuk urea 100% (N2) nyata meningkatkan luas daun pada tanaman selada merah. Perlakuan urin sapi dengan frekuensi 3 kali pemberian menunjukkan hasil yang lebih baik dibandingkan perlakuan lainnya.

Kata kunci: *frekuensi, Lactuca sativa, urin sapi.*

