

Intisari

PENGARUH ABU VULKAN, ARANG SEKAM, DAN KOMPOS SAMPAH KOTA TERHADAP SERAPAN N, P, K SELADA KERITING PADA SISTEM PERTANAMAN VERTIKAL

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Penelitian ini bertujuan mengetahui pengaruh abu vulkan, arang sekam dan kompos sampah kota terhadap serapan N, P dan K tanaman selada (*Lactuca sativa*) pada sistem pertanaman vertikal. Rancangan penelitian yang digunakan adalah Rancangan Acak Lengkap (RAL) faktorial 4x3 dengan tiga ulangan. Faktor pertama adalah faktor media dengan beberapa takaran kombinasi media (M), yaitu M₀ (100% abu vulkan), M₁ (75% abu vulkan + 25% arang sekam), M₂ (66% abu vulkan + 33% arang sekam) dan M₃ (50% abu vulkan + 50% arang sekam). Faktor kedua yang digunakan adalah takaran pupuk kompos sampah kota (K) dimana menggunakan perbandingan media dibanding kompos, yaitu K₁ (kompos 3:1), K₂ (kompos 2:1) dan K₃ (kompos 1:1). Penambahan arang sekam dan pupuk kompos sampah kota secara nyata mampu meningkatkan kadar dan serapan N, P dan K selada keriting. Kadar serapan N, P dan K tertinggi terdapat pada perlakuan M₃K₃ (abu vulkan 50% + arang sekam 50% dan kompos 1:1), dengan kadar serapan N trubus 61,55 mg/tanaman dan kadar serapan N akar 2,82 mg/tanaman, kadar serapan P trubus 18,51 mg/tanaman dan kadar serapan P akar 1,59 mg/tanaman, serta kadar serapan K trubus 256,63 mg/tanaman dan kadar serapan K akar 13,86 mg/tanaman. Berat segar trubus tertinggi terdapat pada perlakuan M₃K₃ (abu vulkan 50% + arang sekam 50% dan pupuk 1:1) yaitu 58,32 gram.

Kata kunci : Abu vulkan, arang sekam, pupuk kompos sampah kota, serapan, selada keriting (*Lactuca sativa*).

Abstract

EFFECT OF VOLCANIC ASH, HUSK, AND MUNICIPAL WASTE COMPOST TO NITROGEN, PHOSPHOROUS, AND POTASSIUM ABSORPTION OF LETTUCE IN VERTICAL CROPPING SYSTEM

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This research was aimed to know the effect of volcanic ash, husk and municipal waste compost to Nitrogen, Phosphorous and Potassium absorption of lettuce in vertical cropping system. The experimental design used in this research was factorial CRD of 4x3 which each replicated 3 times. The first factor was kind of planting media consist of M_0 (volcanic ash 100%), M_1 (volcanic ash 75% + husk 25%), M_2 (volcanic ash 66% + husk 33%) and M_3 (volcanic ash 50% + husk 50%). The second factor was kind of treatment consisted of municipal waste compost consist of K_1 (compost 3:1), K_2 (compost 2:1) and K_3 (compost 1:1). The addition of husk and municipal waste compost gave significant growth and increase Nitrogen, Phosphorous and Potassium absorption by lettuce. Among those levels of Nitrogen, Phosphorous and Potassium absorption is highest in M_3K_3 (volcanic ash 50% + husk 50% and compost 1:1), Nitrogen shoot uptake 61,55 mg/plant and Nitrogen roots uptake 2,82 mg/plant, Phosphorous shoot uptake were 18,51 mg/plant and Phosphorous roots uptake were 18,51 mg/plant, and also Potassium shoot uptake were 256,63 mg/plant and Potassium roots uptake were 13,86 mg/plant. Fresh shoot weight highest in M_3K_3 (volcanic ash 50% + husk 50% and compost 1:1) treatment were 58,32 gram.

Keywords : Volcano ash, husk, municipal waste compost, absorption, lettuce (*Lactuca sativa*).