Pengaruh Pemberian Pupuk Kandang Sapi dan MOL (Mikroorganisme Lokal) Rebung Terhadap Sifat Kimia Tanah dan Pertumbuhan Tanaman Selada (*Lactuca sativa* L.)

Oleh : Lisna Fitri Handasari 134160220

Dibimbing oleh : R. Agus Widodo, SP., MP dan Dr. Ir. Yanisworo WR, M,Si

ABSTRAK

Tanah Regosol umumnya mengandung unsur P dan K, kekurangan unsur N dan pH 6-7. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian pupuk kandang sapi dan MOL rebung terhadap sifat kimia tanah Regosol dan pertumbuhan tanaman selada (*Lactuca sativa* L.). Percobaan dilakukan di rumah kaca dengan menggunakan polybag. Penelitian dilakukan dengan menggunakan Rancangan Acak Lengkap (RAL) dengan dua faktor dan dilakukan 3 ulangan. Faktor pertama terdiri 4 perlakuan pupuk kandang yaitu 0, 5, 10, dan 15 ton/ha. Faktor kedua terdiri dari 4 perlakuan MOL dengan dosis 0, 10, 30, dan 50 ml/3 kg tanah. Parameter analisis kimia meliputi pH, C-Organik, N-total, P-tersedia, K-tersedia, , KPK, jumlah mikroba total, penambat N, pelarut P. Parameter pertumbuhan tanaman selada meliputi tinggi tanaman, berat segar dan berat kering tanaman. Untuk mengetahui pengaruh perlakuan, digunakan Sidik Ragam, apabila terdapat beda nyata dilakukan uji beda antar rerata perlakuan dengan *Duncan Multiple Range Test* (DMRT) dengan jenjang nyata 5%. Hasil penelitian menunjukkan bahwa penambahan pupuk kandang sapi berpengaruh nyata dalam meningkatkan kadar N total, P tersedia, dan K tersedia. Mikroorganisme Lokal(MOL) rebung berpengaruh nyata dalam meningkatkan kadar N total, P tersedia, K tersedia regosol, tinggi tanaman, berat segar tanaman, dan berat kering tanaman. Kombinasi perlakuan penambahan pupuk kandang sapi dan Mikroorganisme Lokal (MOL) rebung berpengaruh nyata terhadap peningkatkan pH H_2O, C organik, dan KPK Regosol. Perlakuan kombinasi yang paling baik pada peningkatan pH H_2O, C organik, dan KPK tanah yaitu pada perlakuan pupuk kandang sapi 15 ton/ha dan Mikroorganisme Lokal (MOL) Rebung 50 ml/polibag (K3M3).

Kata Kunci :Pupuk Kandang Sapi, Tanah Regosol, MOL, Tanaman Selada

Effect of Giving Cow Manure and MOL (Local Microorganisms) Bamboo Shoots on Soil Chemical Properties and Growth of Lettuce (*Lactuca sativa* L.)

By : Lisna Fitri Handasari 134160220

Supervised by : R. Agus Widodo, SP., MP and Dr. Ir. Yanisworo WR, M,Si

ABSTRACT

Regosol soil generally contains elements of P and K, deficiency of elements N and pH 6-7. This study aims to determine the effect of cow manure and bamboo shoots MOL on soil chemical properties of Regosol and growth of lettuce (Lactuca sativa L.). The experiment was carried out in a greenhouse using a poly bag. The research was conducted using a completely randomized design (CRD) with two factors and conducted 3 replications. The first factor consisted of 4 manure treatments, namely 0, 5, 10, and 15 tons / ha. The second factor consisted of 4 MOL treatments with doses of 0, 10, 30, and 50 ml / 3 kg of soil. Chemical analysis parameters include pH, C-Organic, N-total, P-available, K-available,, KPK, total number of microbes, N-fixing, solvent P. Lettuce plant growth parameters include plant height, fresh weight and plant dry weight. To determine the effect of the treatment, the Variance Sidik was used, if there was a significant difference, a difference test between the treatment mean was carried out with the Duncan Multiple Range Test (DMRT) with a significant level of 5%. The results showed that the addition of cow manure had a significant effect in increasing the levels of total N, available P, and available K. Local microorganisms (MOL) of bamboo shoots had a significant effect in increasing levels of total N, available P, regosol available K, plant height, plant fresh weight, and plant dry weight. The combination of treatment with the addition of cow manure and local microorganisms (MOL) of bamboo shoots had a significant effect on increasing the pH of H2O, organic C, and Regosol KPK. The best combination treatment for increasing pH of H2O, C organic, and soil KPK is the treatment of cow manure at 15 tonnes / ha and Local Microorganisms (MOL) Shoots 50 ml / polybags (K3M3).

Keywords: Cow Manure, Regosol Soil, MOL, Lettuce Plants