PENGARUH KOMPOS JERAMI PADI DENGAN DEKOMPOSER MOB - 6 TERHADAP SERAPAN HARA N,P,K TANAMAN CAISIM (*Brasicia Juncea L.*) PADA REGOSOL

SKRIPSI

Oleh :

TAUFIK GHIFFAR ALIFA RIZKY
NIM. 1910232013

Dosen Pembimbing :

1. **Dr. Ir. Gusnidar, MP**
2. **Nofrita Sandi, SP., MP**

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Abstrak

Penggunaan pupuk buatan terus menerus tanpa mengembalikan bahan organik ke dalam tanah mengakibatkan dampak negatif terhadap lingkungan. Diperlukan alternatif pengurangan pupuk buatan, salah satunya penggunaan kompos jerami padi untuk mengurangi penggunaan pupuk buatan. Penelitian ini bertujuan untuk mengetahui pengaruh kompos jerami padi terhadap serapan hara N, P, K Tanaman Caisim (*Brassica juncea* L.) pada Regosol. Perlakuan dalam penelitian ini terdiri dari 5 perlakuan (dosis tanpa kompos; 2,5; 5,0; 7,5; 10 ton/ha) dengan 3 kali ulangan. Satuan percobaan dialokasikan menurut Rancangan Acak Lengkap (RAL) di Rumah kawat Fakultas Pertanian Universitas Andalas. Parameter yang dianalisis yaitu pH tanah; C-organik; N-total; P-tersedia; Rasio C/N; KTK; dan parameter tanaman berupa berat basah, berat kering, serapan N, P, dan K. Hasil penelitian menunjukkan bahwa perlakuan 10 ton/ha (D) memberikan hasil terbaik diindikasikan oleh nilai pH tanah 6,32; C organik 4,36%; N total 0,42%; P tersedia 11,15 ppm; C/N 11,23; KTK 10,64 cmol/kg; berat basah tanaman 41,43 g; berat kering tanaman 12,02 g; N tanaman 0,38 g/polybag; P tanaman 0,098 g/polybag; dan K tanaman 0,54 g/polybag. Dari hasil tersebut, disarankan untuk pemberian kompos jerami padi dengan dosis 10 ton/ha agar mendapatkan peningkatan unsur hara tanah dan produksi yang lebih baik, dan perlu diuji di lapangan.

Kata kunci: Caisim, Kompos Jerami Padi, Regosol, Serapan Hara.

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THE EFFECT OF RICE STRAW COMPOST WITH MOB-6 DECOMPOSER ON THE ABSORPTION OF N, P, AND K NUTRIENTS BY MUSTARD PLANTS (*Brasicia juncea* L.) IN REGOSOL

Abstract

Continuous use of chemical fertilizers without adding organic matter to the soil can reduce soil quality and degrade the environment. One alternative to reduce chemical fertilizer use is by applying rice straw compost. This study was aimed to examine the effect of rice straw compost on the uptake of nitrogen (N), phosphorus (P), and potassium (K) uptake by Caisim (*Brassica juncea* L.) crop grown on Regosol. The experiment consited of five compost doses (0,0 ;2.5, ;5.0, ;7.5; and 10 tons per hectare) with three replications. The experimental units were allocated in wire house based on Completely Randomized Design (CRD). The observed parameters included soil chemical properties (pH, organic C,total N, available P, C/N ratio, and cation exchange capacity) and plant parameters (fresh weight, dry weight, and nutrient uptake of N, P, and K). The best results were found at the 10 tons/ha compost dose. It was indicated by soil pH was 6.32, organic C was 4.36%, total N was 0.42%, available P was 11.15 ppm, C/N ratio was 11.23, and cation exchange capacity was 10.64 cmol/kg. Plant growth also improved, with a fresh weight of 41.43 g, dry weight of 12.02 g, and nutrient uptake was 0.38 g N, 0.098 g P, and 0.54 g K per polybag. Therefore, applying rice straw compost at 10 tons/ha was recommended to improve soil fertility and crop performance, however it is need to conduct under field condition to confirm its effectiveness.

Keywords: Caisim, Nutrient Uptake, Rice Straw Compost, Regosol.

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