PENAMBAHAN PUPUK N, P, K DAN KOJETO (1:1) DALAM MEMPERBAIKI SIFAT KIMIA PSAMMENT SERTA PRODUKSI BAWANG MERAH

TESIS

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Abstrak

Psamment memiliki tingkat kesuburan rendah yang ditandai dengan rendahnya kandungan bahan organik (BO), air dan unsur hara, tetapi sifat porosnya dapat dimanfaatkan untuk pengembangan bawang merah. Budidaya bawang merah di Psamment dapat diperbaiki melalui penambahaan BO dan kapur. Bahan organik yang digunakan berasal dari kompos jerami padi dan tithonia (KOJETO) yang ditambahkan pupuk N, P, K. Penelitian bertujuan untuk menguji interaksi antara dosis pupuk N, P, K dengan dosis KOJETO terhadap sifat kimia Psament dan produksi bawag merah, pengaruh peningkatan dosis pupuk N, P, K terhadap sifat kimia Psament dan produksi bawang merah, serta pengaruh dosis KOJETO terhadap sifat kimia Psament dan produksi bawang merah. Penelitian dilaksanakan di Rumah Kawat dan Laboratorium Tanah Fakultas Pertanian, Universitas Andalas, Padang. Percobaan berbentuk Rancangan Acak Lengap Faktorial dengan 2 faktor dan 3 ulangan. Faktor utama adalah dosis pupuk N, P, K (0,75; 1,00; 1,50) Rekomendasi (R). Faktor kedua adalah dosis KOJETO (2,5; 5,0; 7,5; 10,0) ton/ha. Hasil penelitian menunjukkan bahwa pemberian pupuk N, P, K 1,50 R dengan KOJETO 10,0 ton/ha mampu memperbaiki sifat kimia Psamment dengan nilai terbaik, yaitu pH 5,70; P-tersedia 15,35 ppm; C-organik 2,97 %; N-total 0,34 %; KTK 15,87 cmol/kg; Ca-dd 1,27 cmol/kg; Mg-dd 0,69 cmol/kg; K-dd 0,53 cmol/kg; Na-dd 0,51 cmol/kg serta produksi bawang merah dengan bobot basah 71,10 g/polybag; bobot kering 67,00 g/polybag, angkutan hara N 0,39 g/tanaman; P 0,0018 g/tanaman dan K 0,019 g/tanaman. Untuk meningkatkan kesuburan dan produksi bawang merah dipilih pada perlakuan 1,50 R pupuk N, P,K dengan 10,0 ton/ha KOJETO.

Kata Kunci : Bawang merah, Kojeto (1:1), Psamment, Pupuk N,P,K

THE ADDITION OF N, P, K AND KOJETO FERTILIZERS (1: 1) IN IMPROVING CHEMICAL PROPERTIES OF PSAMMENT AND ONION PRODUCTION

Abstract

Psamment has a low fertility rate which is characterized by low content of organic matter (OM), water, and nutrients, but the shaft properties of the Psamment can be utilized for the cultivation of onion. Onion cultivation in Psamment can be improved by adding OM and lime. The organic material used was derived from the compost of rice straw and tithonia (KOJETO) added with N, P, K fertilizer. This study aimed to examine the interaction between the dosage of N, P, K fertilizer with KOJETO dose on the chemical properties of Psamment and the production of onion, the effect of increased dosage of fertilizer N, P, K on the chemical properties of Psamment and onion production, and the effect of KOJETO doses on the chemical properties of Psamment and onion production. The study was conducted at the Wire House and Soil Laboratory of the Faculty of Agriculture, Andalas University, Padang. The experiment was designed according to a Factorial Randomized Complete Design with 2 factors and 3 replications. The main factor was the dose of fertilizer N, P, K (0.75; 1.00; 1.50) Recommendation (R). The second factor was KOJETO dose (2.5; 5.0; 7.5; 10.0) ton / ha. The results showed that administration of N, P, K 1.50 R with KOJETO 10.0 tons / ha was able to improve the chemical properties of Psamment with the best value, namely pH 5.70; available-P 15.35 ppm; Organic-C 2.97%; total-N 0.34%; CEC 15.87 cmol / kg; exCa 1.27 cmol / kg; exMg 0.69 cmol / kg; exK 0.53 cmol / kg; exNa 0.51 cmol / kg and onion production with wet weights of 71.10 g / polybag; dry weight 67.00 g / polybag, N nutrient transportation 0.39 g / plant; P 0.0018 g / plant and K 0.019 g / plant. To increase fertility and onion production, it was selected at 1.50 R of N, P, K fertilizer with 10.0 tons / ha KOJETO.

Keywords: Onion, Kojeto (1: 1), Psamment, N, P, K fertilizer