

ABSTRAK

PENGARUH RESIDU BAHAN PEMBENAH TANAH DAN PEMUPUKAN N, P, K TERHADAP NISBAH DISPERSI TANAH PADA TANAMAN JAGUNG (*ZEAMAYS*)

Oleh

Dea Sapira

Penurunan kualitas tanah akibat degradasi menjadi tantangan utama dalam budidaya tanaman jagung (*Zea mays* L.). Salah satu indikator penting dalam menilai stabilitas tanah adalah dispersi nisbah, yang mencerminkan tingkat kerentanan tanah terhadap erosi. Upaya yang digunakan untuk mengatasi nisbah dispersi tanah yaitu dengan residu bahan pembenah tanah dan pemupukan N, P, K. Tujuan dari penelitian ini untuk mengetahui pengaruh residu bahan pembenah tanah dan pemupukan N, P, K terhadap penurunan nilai nisbah dispersi tanah pada tanaman jagung. Penelitian dilaksanakan dari bulan Maret 2024 sampai Oktober 2024 di LTPD Unila dan Laboratorium Kimia Tanah FP Unila. Penelitian ini menggunakan Rancangan Acak Kelompok (RAK) faktorial dua faktor, faktor pertama yaitu kombinasi pembenah tanah: B0 = Tanpa Residu Pembenah Tanah; B1 = Residu Biochar Sekam Padi + Pupuk Kandang (10 Mg ha⁻¹); B2 = Residu Biochar Tongkol Jagung + Pupuk Kandang (10 Mg ha⁻¹); B3 = Residu Biochar Batang Singkong + Pupuk Kandang (10 Mg ha⁻¹); faktor kedua yaitu dosis pemupukan N,P,K dengan 3 perlakuan : P0 = Tanpa N,P,K; P1 = ½ Dosis N,P,K; P2 = 1 Dosis N,P,K, diulang sebanyak tiga sehingga diperoleh 36 satuan percobaan. Analisis data dilakukan secara kualitatif menggunakan *Microsoft excel*. Hasil penelitian menunjukkan bahwa seluruh kombinasi residu bahan pembenah tanah dan pemupukan N,P,K tidak berpengaruh terhadap penurunan nilai dispersi tanah pada tanaman jagung (*Zea mays*).

Kata Kunci: Residu biochar dan pupuk kandang, Jagung, Nisbah Dispersi, N,P,K

ABSTRACT

THE EFFECT OF SOIL IMPROVEMENT MATERIAL RESIDUE AND N, P, K FERTILIZER ON SOIL DISPERSION RATIO IN CORN (ZEA MAYS)

By

Dea Sapira

The decline in soil quality due to degradation is a major challenge in corn (*Zea mays* L.) cultivation. One important indicator in assessing soil stability is the dispersion ratio, which reflects the level of soil susceptibility to erosion. Efforts used to overcome the soil dispersion ratio are soil amendment residues and N, P, K fertilization. The purpose of this study was to determine the effect of soil amendment residues and N, P, K fertilization on the decrease in the value of the soil dispersion ratio in corn plants. The study was conducted from March 2024 to October 2024 at the Unila LTPD and the Unila FP Soil Chemistry Laboratory. This study used a two-factor factorial Randomized Block Design (RAK), the first factor being the combination of soil amendments: B0 = Without Soil Amendment Residue; B1 = Rice Husk Biochar Residue + Manure (10 Mg ha⁻¹); B2 = Corn Cob Biochar Residue + Manure (10 Mg ha⁻¹); B3 = Cassava Stem Biochar Residue + Manure (10 Mg ha⁻¹); the second factor is the dose of N,P,K fertilizer with 3 treatments: P0 = Without N,P,K; P1 = ½ N,P,K Dose; P2 = 1 N,P,K Dose, repeated three times to obtain 36 experimental units. Data analysis was carried out qualitatively using Microsoft Excel. The results showed that all combinations of soil conditioner residues and N,P,K fertilizers had no effect on reducing the value of soil dispersion in corn plants (*Zea mays*).

Keywords: Biochar and manure residue, Corn, Dispersion, N, P, K