

ABSTRAK

PENGARUH PUPUK KANDANG AYAM DAN BIOCHAR TERHADAP PERILAKU ADSORPSI FOSFOR (P) DAN P TERPANEN PADA PERTANAMAN PADI GOGO

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Padi merupakan makanan pokok sebagian besar masyarakat Indonesia. Penelitian ini dilakukan untuk mengetahui perilaku adsorpsi fosfor (P) menggunakan Metode Langmuir, P terpanen pada tanaman padi gogo serta produksi padi gogo, dan mengetahui korelasi antara parameter Langmuir dengan P tersedia dan produksi padi gogo. Penanaman padi gogo dan analisis unsur hara disusun dalam rancangan acak kelompok, terdapat 4 perlakuan yaitu, B0 = pupuk dasar (Urea : 200 kg.ha⁻¹, SP-36 : 100 kg.ha⁻¹, KCl : 100 kg.ha⁻¹); B1 = biochar 5 Mg.ha⁻¹ + pupuk dasar; B2 = pupuk kandang ayam 5 Mg.ha⁻¹ + pupuk dasar; dan B3 = kombinasi B1 dan B2. Penanaman padi gogo dilaksanakan di Laboratorium Lapangan Terpadu, Fakultas Pertanian, Universitas Lampung. Sedangkan analisis unsur hara dilakukan di Labiratorium Ilmu Tanah, Fakultas Pertanian, Universitas Lampung. Hasil penelitian menunjukkan pemberian bahan organik berupa pupuk kandang ayam dan biochar mampu meningkatkan produksi padi gogo. Pemberian pupuk kandang ayam pada tanah sebelum tanam mampu menurunkan jerapan maksimum P (X_{max}), namun pemberian pupuk kandang pada tanah setelah panen belum mampu menurunkan jerapan maksimum P (X_{max}) pada tanah. Jerapan maksimum P (X_{max}) tanah sebelum tanam tidak berkorelasi terhadap P tersedia, dan P terpanen, pada tanah setelah panen jerapan maksimum P (X_{max}) berkorelasi positif terhadap P tersedia, dan tidak berkorelasi terhadap P terpanen.

Kata kunci : Biochar, Langmuir, P terpanen Padi gogo, Pupuk kandang ayam.

ABSTRACT

THE EFFECT OF CHIKEN MANURE AND BIOCHAR ON PHOSPORUS (P) ADSORPTION BEHAVIOR AND HARVESTED P BY GOGO RICE

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Rice is the staple food of the most Indonesian people. The research was conducted to determine the adsorption behavior of phosphorus (P) using the Langmuir method, harvested P and production of gogo rice. Gogo rice planting and nutrient analysis were arranged in a randomized block design, there were 4 treatments, namely, B0 = basic fertilizer (Urea : 200 kg.ha⁻¹, SP-36 : 100 kg.ha⁻¹, KCl : 100 kg.ha⁻¹); B1 = biochar 5 Mg.ha⁻¹ + basic fertilizer; B2 = chicken manure 5 Mg.ha⁻¹ + basic fertilizer; and B3 = combination of B1 and B2. Gogo rice planting was carried out at the Integrated Field Laboratory, Faculty of Agriculture, University of Lampung. Meanwhile, nutrient analysis was carried out at the Laboratory of Soil Science, Faculty of Agriculture, University of Lampung. The results showed that the application of organic materials in the form of chicken manure and biochar was able to increase the production of gogo rice. Application of chicken manure to the soil before planting can reduce the maximum adsorption of P (Xmax), but application of manure to the soil after harvest has not been able to reduce the maximum adsorption of P (Xmax) in the soil. The maximum adsorption of P (Xmax) in the soil before planting is not correlated with available P, and harvested P, in the soil after harvesting the maximum P absorption (Xmax) is positively correlated with available P, and not correlated with harvested P.

Key word : Biochar, Chiken manure, Gogo rice, Harvested P, Langmuir.