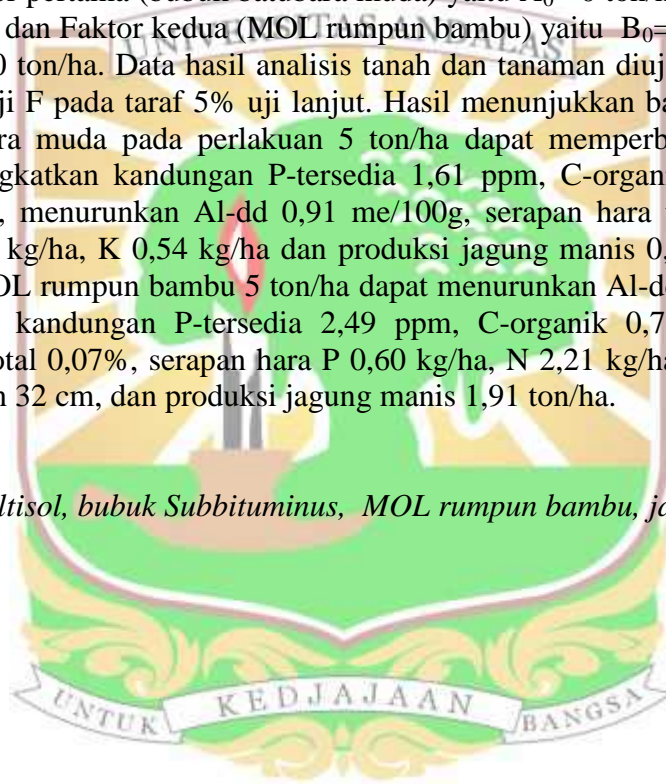


APLIKASI BUBUK BATUBARA MUDA (*Subbituminus*) DAN MOL RUMPUN BAMBU DALAM MEMPERBAIKI SIFAT KIMIA ULTISOL DAN MENINGKATKAN PRODUKSI JAGUNG MANIS (*Zea mays saccharata*)

ABSTRAK

Penelitian dilaksanakan pada bulan Agustus 2015 sampai Januari 2016 di Kebun Percobaan dan Laboratorium Jurusan Tanah Fakultas Pertanian Universitas Andalas Padang, yang bertujuan untuk mempelajari pengaruh aplikasi bubuk batubara muda (*Subbituminus*) dan MOL rumpun bambu terhadap sifat kimia Ultisol dan produksi jagung manis (*Zea mays saccharata*). Penelitian menggunakan Rancangan Acak Kelompok dalam Faktorial 3 x 3 dengan 3 kali ulangan. Faktor pertama (bubuk batubara muda) yaitu $A_0 = 0$ ton/ha, $A_1 = 5$ ton/ha, $A_2 = 10$ ton/ha dan Faktor kedua (MOL rumpun bambu) yaitu $B_0 = 0$ ton/ha, $B_1 = 5$ ton/ha, $B_2 = 10$ ton/ha. Data hasil analisis tanah dan tanaman diuji secara statistik berdasarkan uji F pada taraf 5% uji lanjut. Hasil menunjukkan bahwa pemberian bubuk batubara muda pada perlakuan 5 ton/ha dapat memperbaiki sifat kimia Ultisol meningkatkan kandungan P-tersedia 1,61 ppm, C-organik 0,65%, KTK 1,94 me/100g, menurunkan Al-dd 0,91 me/100g, serapan hara tanaman P 0,52 kg/ha, N 1,97 kg/ha, K 0,54 kg/ha dan produksi jagung manis 0,82 ton/ha. Pada pemberian MOL rumpun bambu 5 ton/ha dapat menurunkan Al-dd 0,70 me/100g, meningkatkan kandungan P-tersedia 2,49 ppm, C-organik 0,72%, KTK 0,58 me/100g, N-total 0,07%, serapan hara P 0,60 kg/ha, N 2,21 kg/ha, K 0,56 kg/ha, tinggi tanaman 32 cm, dan produksi jagung manis 1,91 ton/ha.

Kata kunci: Ultisol, bubuk Subbituminus, MOL rumpun bambu, jagung manis



APPLICATION OF YOUNG COAL POWDER (*Subbituminus*) AND MOL BAMBOO ROOTS TO INERASE CHEMICAL PROPERTIES OF ULTISOL AND INCREASE THE PRODUCTION OF ZEA SWEET CORN (*Zea mays saccharata*)

ABSTRACK

This study was conducted in Experiment Station of Agriculture Faculty, Andalas University from August 2015 to January 2016. The objectives of this study were to study the influence of application of young coal powder (*Subbituminus*) and local microorganism (MOL) from bamboo roots chemical properties of Ultisol and production of sweet corn (*Zea mays saccharata*). This experiment consisted of 2 factors (young coal powder and MOL) with 3 replications. The experimental design as block design (RBD). The first factor (young coal powder) consisted of 3 levels, those were $A_0 = 0$ ton/ha, $A_1 = 5$ ton/ha, $A_3 = 10$ ton/ha. The second factor (MOL bamboo roots) consist of 3 levels, those were $A_0 = 0$ ton/ha, $A_1 = 5$ ton/ha, $A_3 = 10$ ton/ha. The data were statistically analysis based on F-test at 5% level of significance. The results showed that increasing application of young coal powder about 5 ton/ha increased the chemical properties of Ultisol such as increasing of available-P by 1.61 ppm, C-organic by 0.65%, CEC by 1,94 me /100g, exchangeable Al lower by 0.91 me/100g, plant nutrient uptake P by 0.52 kg/ha, N by 1.97 kg/ha, K by 0.54 kg/ ha and production sweet corn of 0.82 ton/ha. The application of MOL about 5 ton/ha could decrease exchangeable Al an amount of 0,70 me/100g, increased available P to 2.49 ppm, C-organic by 0.72%, CEC 0.58 me/100g, N-total by 0.07%, plant nutrient uptake P by 0.60 kg/ha, N by 2.21 kg/ha, K by 0.56 kg/ha, plant height by 32 cm, and production sweet corn by 1.91 ton/ha.

Key words: Ultisol, Subbituminus powder, MOL bamboo, sweet corn

