

DIMAS BAGUS ALMAKSUMI NIM. 17.03.111.00032.

Pengaruh Residu Biochar Sekam Padi dan Pupuk Kandang terhadap P Tersedia, Serapan P, Pertumbuhan dan Produksi Tanaman Jagung (*Zea mays* L.) Lokal Madura.

Dibawah Bimbingan : **Ir. Slamet Supriyadi, M.Si.**

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh residu biochar sekam padi dan pupuk kandang terhadap P tersedia, serapan P, pertumbuhan dan produksi tanaman jagung (*Zea mays* L.) lokal Madura di Alfisol Madura. Penelitian dilaksanakan di Kebun Hortikultura Socah, Kabupaten Bangkalan, Jawa Timur, yang terletak pada ketinggian ± 5 meter dpl, dari bulan November 2020 sampai Maret 2021. Percobaan dirancang dengan Rancangan Acak Kelompok (RAK) non faktorial, yaitu P0 (kontrol), P1 (10 t/ha residu biochar), P2 (7,5 t/ha residu biochar dan 2,5 t/ha residu pupuk kandang), P3 (5 t/ha residu biochar dan 5 t/ha residu pupuk kandang), P4 (2,5 t/ha residu biochar dan 7,5 t/ha residu pupuk kandang), P5 (10 t/ha residu pupuk kandang). Biochar dan pupuk kandang telah dibenamkan sekitar setahun yang lalu. Hasil penelitian menunjukkan perlakuan berpengaruh tidak nyata pada P tersedia dan serapan P. Berdasarkan data serapan P, perlakuan P4 memberikan hasil P tersedia yang cukup bagi tanaman. Residu biochar sekam padi dan pupuk kandang berpengaruh nyata terhadap tinggi tanaman, diameter tongkol jagung, bobot kering biji per tanaman dan produksi. Produksi tertinggi dicapai pada perlakuan P4 yaitu 4,59 ton atau 38% dibandingkan dengan produksi dari P0 (kontrol).

Kata Kunci : Residu Biochar Sekam Padi, Residu Pupuk Kandang, Fosfor, Jagung (*Zea mays* L.) Lokal Madura.

DIMAS BAGUS ALMAKSUMI NIM. 17.03.111.00032.

Residue Effect of Rice Husk Biochar and Cow Manure on Available Phosphorus, Phosphorus Uptake, Growth, and Yield of Madura Local Corn (*Zea mays* L.).

Under the guidance of : **Ir. Slamet Supriyadi, M.Si.**

ABSTRACT

The objective of this study was to investigate the residue effect of rice husk biochar and cow manure on available phosphorus, phosphorus uptake, growth and yield of Madura local corn (*Zea mays* L.) in an Alfisol (Madura). The research was carried out at the Horticulture's Garden, Socah, Bangkalan, East Java located at 5 m above sea levels from November 2020 to March 2021. A traditionally made biochar of rice husk either with cow manure or not was planted in the soil in the rainy season about a year ago. The research was arranged on a complete randomized block design (CRBD). Consisting of six treatments, namely P0 (without biochar and cow manure), P1 (biochar only at 10 ton/ha), P2 (biochar at 7,5 and cow manure at 2,5 ton/ha), P3 (biochar at 5 and cow manure at 5 ton/ha), P4 (biochar at 2,5 and cow manure at 7,5 ton/ha), and P5 (cow manure only at 10 ton/ha). The results showed there was no significant effect of the treatments on available P and P uptake. However, based on the P uptake, all treatments resulted sufficient P for plant. The residue of rice husk biochar and manure had significant effect on plant height, corn cob diameter, seed dry weight per plant and corn yield. The treatment of P4 gave the highest yield (4,59 ton/ha), it was about 38% higher than that of the control (P0).

Keywords: Rice Husk Biochar Residue, Cow Manure Residue, Phosphorus, Madura Local Corn (*Zea mays* L.).