

Riski Puji Lestari 160311100012. Pengaruh Biochar Sekam Padi dan Pupuk Kandang Sapi Terhadap Serapan P dan Pertumbuhan Tanaman Kedelai (*Glycine max* L.). Pembimbing **Ir. Slamet Supriyadi, M.Si.**

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh biochar sekam padi dan pupuk kandang sapi terhadap serapan unsur hara P dan Pertumbuhan tanaman kedelai (*Glycine max* L.) di Alfisol Madura. Penelitian dilaksanakan di Kebun Hortikultura Socah, Kabupaten Bangkalan, Jawa Timur, yang terletak pada ketinggian ± 5 meter dpl, dari bulan Oktober 2019 sampai Maret 2020. Percobaan dirancang dengan Rancangan Acak Kelompok (RAK) non faktorial, yaitu P0 (kontrol), P1 (10 t/ha biochar), P2 (7,5 t/ha biochar dan 2,5 t/ha pupuk kandang sapi), P3 (5 t/ha biochar dan 5 t/ha pupuk kandang sapi), P4 (2,5 t/ha biochar dan 7 t/ha pupuk kandang sapi), P5 (10 t/ha pupuk kandang sapi). Hasil penelitian menunjukkan tidak terdapat pengaruh biochar sekam padi dan pupuk kandang sapi terhadap serapan P dan pertumbuhan tanaman kedelai, kecuali pada parameter bobot kering akar. Meskipun demikian, perlakuan P3 (5 t/ha Biochar dan 5 t/ha Pupuk Kandang) cenderung memberikan nilai tertinggi dan meningkatkan serapan P sebesar 20% dibandingkan dengan perlakuan tanpa biochar dan pupuk kandang sapi.

Kata kunci : Biochar sekam padi, pupuk kandang sapi, Fosfor, Pertumbuhan, Kedelai (*Glycine max* L.).

Riski Puji Lestari 160311100012. Effect of Rice Husk Biochar and Cow Manure On Phosphorus uptake and soybean plant growth (*Glycine max* L.). **Supervisor**
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ABSTRACT

The objective of this study was to investigate the effect of rice husk biochar and cow manure on phosphorus uptake and growth of soybean plants (*Glycine max* L.) in Alfisol Madura. The research was carried out at the Horticulture's Garden, Socah, Bangkalan, East Java located at 5 m above sea levels from October 2019 to March 2020. The research was arranged on a complete randomized design (CRD) consisting of six treatments, namely P0 (without biochar and organic fertilizer), P1 (biochar only at 10 tons/ha), P2 (biochar at 7,5 and organic fertilizer at 2,5 tons/ha), P3 (biochar at 5 and organic fertilizer at 5 tons/ha), P4 (biochar at 2,5 and organic fertilizer at 7,5 tons/ha), and P5 (organic fertilizer only at 10 tons/ha). The results showed there was no significant effect of rice husk biochar and cow manure on phosphorus uptake and soybean plant growth, excepts for root dry weight parameters. However, P3 (biochar at 5 and organic fertilizer at 5 tons/ha) tended to give the highest value and increased P uptake 20% compared to the treatment without biochar and cow manure.

Keywords : Rice Husk Biochar, cow manure, Phosphor, Growth, Soybean (*Glycine max* L)