INTISARI

Penggunaan kombinasi biochar sekam padi, kompos dan abu dapur merupakan salah satu upaya untuk meningkatkan efektifitas pemupukan di musim penghujan, sekaligus memperbaiki sifat tanah, pertumbuhan tanaman, dan produktivitas tanaman bawang merah. Penelitian ini bertujuan untuk mengetahui pengaruh kombinasi biochar sekam padi, kompos dan abu dapur terhadap respon tanaman bawang merah (*Allium ascalonicum* L.). Penelitian ini dilakukan di Desa Senggowar, Kecamatan Gondang, Kabupaten Nganjuk. Rancangan penelitian adalah Rancangan Acak Kelompok Lengkap (RAKL) non faktorial berupa kombinasi dosis biochar sekam padi, kompos dan abu dapur yaitu, kontrol (A0), 5 ton/ha (A1); 10 ton/ha (A2); 15 ton/ha (A3); 20 ton/ha (A4); 25 ton/ha (A5); 30 ton/ha (A6); 35 ton/ha (A7); 40 ton/ha (A8); 45 ton/ha (A9); 50 ton/ha (A10). Masing-masing perlakuan diulang sebanyak 3 kali. Hasil percobaan menunjukkan bahwa perlakuan kombinasi biochar sekam padi, kompos dan abu dapur mampu menurunkan pH dan meningkatkan C-organik, N-total, P-tersedia, serta K-tersedia Tanah Vertisol. Penambahan kombinasi biochar sekam padi 25 ton/ha + kompos 20 ton/ha + abu dapur 1 ton/ha menghasilkan produktivitas tanaman bawang merah yang optimal yaitu sebesal 12,26 ton/ha.

Kata kunci: *Biochar, Kompos, Abu, Vertisol, Bawang merah*

ABSTRACT

The use of a combination of rice husk biochar, compost and kitchen ash is one of the efforts to increase the effectiveness of fertilization in the off season, as well as improve soil properties, plant growth, and productivity of shallots. This study aims to determine the effect of the combination of rice husk biochar, compost and kitchen ash on the response of shallot (*Allium ascalonicum* L.). This research was conducted in Senggowar Village, Gondang District, Nganjuk Regency. The research design was a non-factorial Completely Randomized Block Design (RAKL) in the form of a combination dose of rice husk biochar, compost and kitchen ash, namely, control (A0), 5 tons/ha (A1); 10 tons/ha (A2); 15 tons/ha (A3); 20 tons/ha (A4); 25 tons/ha (A5); 30 tons/ha (A6); 35 tons/ha (A7); 40 tons/ha (A8); 45 tons/ha (A9); 50 tons/ha (A10). Each treatment was repeated 3 times. The experimental results showed that the combination treatment of rice husk biochar, compost and kitchen ash was able to reduce pH and increase organic C, total N, available P, and available K in Vertisol soil. The addition of a combination of 25 tons/ha rice husk biochar + 20 tons/ha compost + 1 ton/ha kitchen ash resulted in an optimal shallot plant productivity of 12.26 tons/ha.

Keywords: Biochar, Compost, Ash, Vertisol, Shallot

Mengetahui

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