

INTISARI

Tanah Inceptisol Nawungan memiliki kesuburan yang baik namun kurang efektif dalam pemupukan tanaman, karena unsur hara tersedia banyak hilang karena tercuci atau menguap. Oleh karena itu diperlukan inovasi baru dalam budidaya bawang merah di daerah tersebut. Penelitian ini bertujuan untuk meningkatkan hasil panen tanaman bawang merah dan menghitung efisiensi pemupukan NPK tanaman bawang merah dengan pemberian pupuk hayati dan *biochar*. Penelitian ini dilaksanakan pada bulan April–September 2023 di Dusun Nawungan 1, Desa Selopamiro, Kecamatan Imogiri, Kabupaten Bantul, Provinsi Yogyakarta terletak pada 7°53'03,36" S, 110°24'37,58" E. Penelitian ini menggunakan rancangan acak kelompok lengkap (RAKL) 2 faktorial 5x2 ditambah 1 kontrol negatif dengan 3 ulangan sehingga terdapat 33 percobaan. Faktor satu: *Biochar*(B0), *Biochar* Sekam Padi 5 ton.ha⁻¹ (B1), *Biochar* Sekam Padi 10 ton.ha⁻¹ (B2), *Biochar* batok kelapa 5 ton.ha⁻¹ (B3), dan *Biochar* Batok Kelapa 10 ton.ha⁻¹ (B4). Faktor kedua: Tanpa Pupuk Hayati (H0A), Tanpa pupuk hayati + NPK 400 kg.ha⁻¹(H0B) dan dengan Pupuk Hayati + NPK 400 kg.ha⁻¹ (H1B). Hasil penelitian ini menunjukkan bahwa perlakuan aplikasi pupuk hayati + NPK 400 kg.ha⁻¹+ *biochar* batok kelapa mampu meningkatkan C-Organik, N-Total, P-tersedia, K-tersedia, pertumbuhan tinggi tanaman, jumlah daun, hasil panen, serapan NPK oleh tanaman dan meningkatkan efisiensi pemupukan NPK pada tanah Inceptisol.

Keywords: bawang merah, biochar, Inceptisol, pupuk hayati, NPK

ABSTRACT

Although the inceptisol soil in Nawungan has good fertility, it is not very effective in fertilizing plants because a lot of the nutrients are lost due to evaporation or washing away. As a result, new and inventive methods of growing shallots in that region were needed. The purpose of this study was to improve the yield of shallot plants and the efficiency of NPK fertilization of shallot plants by applying biochar and biofertilizer. The study was place at Nawungan 1, Selopamioro Village, Imogiri district, Bantul Regency, Yogyakarta Province, from April to September of 2023. Its coordinates are 7° 53'03.36" S, 110° 24'37.58" E. In order to create 33 trials, this study used a completely random group design (CRGD) with two factorials of 5 by 2 and one control negative with three repeats. One factor is biochar (B0), followed by biochar rice husk 5 tons/ha (B1), biochar rice husk 10 tons/ha (B2), biochar shell coconut 5 tons/ha (B3), and biochar shell coconut 10 tons/ha (B4). The second element is that without Biofertilizer (H0A), Without Biofertilizer + NPK 400 kg. ha⁻¹ (H0B) and with Biofertilizer + NPK 400 kg. ha⁻¹ (H1B). The research result showed that treatment application biofertilizer + NPK 400 kg. ha⁻¹ + *biochar* coconut shell capable increase C- Organic, N-Total, P- available, K- available, growth tall plants, quantity leaves, yield harvest, NPK uptake by shallot plants and increase efficiency NPK fertilization on the Inceptisol .

Keywords: biochar, biofertilizer, Inceptisol, NPK, Shallot