

INTISARI

Entisol salah satu jenis tanah yang banyak dimanfaatkan dalam kegiatan pertanian, namun memiliki kesuburan yang rendah akibat hara tidak dapat terikat oleh partikel tanah. Perbaikan pengolahan tanah dapat membantu menekan kehilangan hara. Penelitian ini bertujuan untuk mengetahui pengaruh interaksi perlakuan biochar sekam padi, *Rhizobium*, dan pupuk NPK terhadap sifat kimia tanah, pertumbuhan, serapan hara, dan hasil kacang tanah. Rancangan yang digunakan pada penelitian yaitu Rancangan Acak Lengkap (RAL) terdiri dari 3 faktor. Faktor pertama adalah inokulasi *Rhizobium*, yaitu perlakuan R0 = tanpa *Rhizobium* dan R1 = dengan *Rhizobium*. Faktor kedua adalah dosis aplikasi biochar sekam padi, yaitu perlakuan B0 = kontrol, B1 = biochar 5 ton/ha, dan B2 = biochar 10 ton/ha. Faktor ketiga adalah dosis rekomendasi Pupuk NPK, yaitu perlakuan N0 = kontrol, N1 = dosis 50% NPK, dan N2 = dosis 100% NPK. Data dianalisis dengan Anova dan uji DMRT taraf 5%. Hasil penelitian menunjukkan bahwa interaksi antar perlakuan *Rhizobium*, biochar sekam padi dan pupuk NPK tidak memberikan interaksi yang nyata terhadap sifat kimia tanah, pertumbuhan, serapan hara dan hasil tanaman kacang tanah. Interaksi antar biochar dan pupuk NPK berpengaruh nyata terhadap penurunan pH H₂O tanah. Interaksi antar *Rhizobium* dan biochar sekam padi berpengaruh nyata terhadap berat segar dan kering tajuk, serta serapan N-total tajuk tanaman kacang tanah. Interaksi antar *Rhizobium* dan pupuk NPK berpengaruh nyata terhadap berat segar tajuk, serapan P total akar, berat segar dan berat kering polong tanaman kacang tanah. Aplikasi *Rhizobium* dan biochar sekam padi mampu mengurangi penggunaan pupuk NPK hingga 50% dosis pada budidaya kacang tanah.

Kata kunci: Biochar Sekam Padi, Entisol, Kacang Tanah, Pupuk NPK, *Rhizobium*

ABSTRACT

Entisols is a type of soil that is widely used in agricultural activities, but has low fertility level because nutrients cannot be bound by soil particles. Improving soil processing can help reduce nutrient loss. This research aims to determine the interaction effect of rice husk biochar, rhizobium and NPK fertilizer on soil chemical properties, growth, nutrient uptake, and yield of peanut. The research was conducted using a Completely Randomizes Design (CRD) consisting of 3 factors. The first factor is Rhizobium inoculation, namely treatment R0 = without Rhizobium and R1 = with Rhizobium. The second factor is the application dose of rice husk biochar, namely treatment B0 = control, B1 = biochar 5 tons/ha, and B2 = biochar 10 tons/ha. The third factor is the recommended dose of NPK fertilizer, namely treatment N0 = control, N1 = dose of 50% NPK, and N2 = dose of 100% NPK. Data were analyzed using Anova and DMRT test at 5% level. The research results showed that the interaction between Rhizobium treatments, rice husk biochar and NPK fertilizer did not provide a significant interaction on soil chemical properties, growth, nutrient uptake and yield of peanuts. The interaction between biochar and NPK fertilizer has a significant effect on reducing the pH H₂O of soil. The interaction between Rhizobium and rice husk biochar had a significant effect on the fresh and dry weight of shoots, as well as total N uptake of peanut plant shoots. The interaction between Rhizobium and NPK fertilizer had a significant effect on shoot fresh weight, total root P uptake, fresh weight and dry weight of peanut pods. The application of Rhizobium and rice husk can reduce the use of NPK fertilizer by up to 50% in peanut cultivation.

Keywords: Rice Husk Biochar, Entisol, Peanuts, NPK Fertilizer, Rhizobium