INTISARI

Penambahan biochar kayu dan pupuk kandang kambing terhadap sifat Ultisol, Jasinga, Bogor. Penelitian ini menggunakan rancangan acak lengkap (*Randomize Complete Design*) faktorial dengan dua faktor perlakuan dan tiga ulangan. Faktor pertama adalah dosis biochar kayu yaitu biochar kayu dosis 0%, 5%, 10% dan 15%. Sedangkan faktor kedua yaitu dosis pupuk kandang kambing dosis pupuk kandang 0%, 5%, 10%. Analisis fisika dan kimia tanah, biochar kayu, pupuk kandang kambing menggunakan analisis 2 varian ANOVA untuk melihat perbedaan antar perlakuan dan dilakukan uji lanjut dengan *Duncan Multiple Range Test* (DMRT) dengan tingkat signifikan 5% untuk mengetahui hasil yang signifikan. Hasil penelitian menunjukkan bahwa pengaruh penambahan biochar kayu dan pupuk kandang kambing mampu memperbaiki sifat fisik Ultisol. Perlakuan biochar kayu dan pupuk kandang kambing dapat berpengaruh nyata pada parameter pH, Berat Volume, C-Organik, porositas, kadar lengas, air tersedia, pori drainase cepat, pori drainase lambat, permeabilitas, stabilitas agregat, indeks plastisitas.

Kata kunci : Ameliorasi, Aerasi, Amandemen, Kualitas, Interaksi.

ABSTRACT

The addition of wood biochar and goat manure on the physical properties of Ultisol soil in Jasinga, Bogor. This study used a factorial Randomized Complete Design with two treatment factors and three replications. The first factor was the dose of wood biochar, which were 0%, 5%, 10%, and 15%. The second factor was the dose of goat manure which were 0%, 5%, and 10%. Physical and chemical analyses of the soil, wood biochar, and goat manure were performed using two-way ANOVA to observe differences between treatments, followed by a Duncan Multiple Range Test (DMRT) at a 5% significance level to determine significant results. The results showed that the addition of wood biochar and goat manure could improve the physical properties of Ultisols. Treatments of wood biochar and goat manure significantly affected parameters such as pH, bulk density, organic carbon content, porosity, moisture content, available water, rapid drainage pores, slow drainage pores, permeability, aggregate stability, and plasticity index.

Keyword: Amelioration, Aeration, Amendment, Quality, Interaction.