

ABSTRAK

Permasalahan Ultisol pada umumnya mempunyai sifat fisik yang kurang baik, antara lain agregat tanah kurang stabil, distribusi pori tidak seimbang, infiltrasi dan permeabilitas rendah. Stabilitas agregat yang rendah menyebabkan struktur tanah mudah hancur akibat pengaruh tetesan air hujan yang akan menyumbat pori-pori tanah. Upaya yang dapat dilakukan untuk memperbaiki sifat fisik Ultisol Khususnya Kemantapan Agregat adalah dengan penambahan bahan organik, salah satunya dengan pemberian bokashi sekam padi dan kotoran ayam terhadap kemantapan agregat serta hasil kedelai. Penelitian ini bertujuan untuk mengkaji pengaruh bokashi sekam padi terhadap kemantapan agregat serta hasil tanaman kedelai pada Ultisol. Penelitian ini menggunakan Rancangan Acak Kelompok dengan 5 perlakuan dan 5 kelompok, yaitu b₀=tanpa bokashi, b₁=7,5 ton/ha bokashi, b₂=15 ton/ha bokashi, b₃=22,5 ton/ha bokashi dan b₄=30 ton/ha bokashi. Parameter yang diamati bahan organik, total ruang pori, bobot volume tanah, persen agregat, kemantapan agregat, tinggi tanaman, dan hasil tanaman. Data penelitian ini dianalisis menggunakan sidik ragam untuk melihat pengaruh rata-rata perlakuan dilanjutkan dengan uji Duncan Multiple Range Test pada taraf $\alpha=5\%$. Hasil penelitian diperoleh bahwa pemberian bokashi sekam padi dan kotoran ayam pada dosis 15 ton/ha sudah mampu meningkatkan bahan organik, total ruang pori, kemantapan agregat, dan menurunkan bobot volume tanah. Pemberian bokashi sekam padi dan kotoran ayam pada dosis 15 ton/ha sudah mampu meningkatkan laju pertumbuhan tanaman kedelai serta hasil tanaman kedelai

Kata kunci: Bokashi, Kedelai, Agregat, Ultisol

ABSTRACT

The problem is that Ultisol generally has poor physical properties, including less stable soil aggregates, unbalanced pore distribution, low infiltration and permeability. Low aggregate stability causes the soil structure to be easily destroyed due to the influence of raindrops which will clog the soil pores. Efforts that can be made to improve the physical properties of Ultisol, especially aggregate stability, are by adding organic materials, one of which is by giving bokashi rice husks and chicken manure to aggregate stability and soybean yield. This research aims to examine the effect of rice husk bokashi on aggregate stability and soybean crop yield in Ultisol. This research used a Randomized Block Design with 5 treatments and 5 groups, namely b₀=without bokashi, b₁=7.5 tons/ha bokashi, b₂=15 tons/ha bokashi, b₃=22.5 tons/ha bokashi and b₄=30 tons/ha bokashi. The parameters observed were organic matter, total pore space, soil volume weight, aggregate percentage, aggregate stability, plant height, and plant yield. This research data was analyzed using variance to see the average effect of treatment followed by the Duncan Multiple Range Test at a level of $\alpha=5\%$. The research results showed that the application of bokashi rice husks and chicken manure at a dose of 15 tons/ha

was able to increase organic matter, total pore space, aggregate stability, and reduce soil volume weight. Providing bokshi rice husks and chicken manure at a dose of 15 tons/ha has been able to increase the growth rate of soybean plants and the yield of soybean plants.

Key words: Bokashi, Soybeans, Aggregate, Ultisol