

## **Intisari**

Penelitian ini bertujuan untuk mengetahui pengaruh biochar sekam padi dan pupuk kandang kambing dengan dosis berbeda terhadap perubahan beberapa sifat kimia tanah, pertumbuhan tanaman, dan serapan unsur hara N pada tanah dan tanaman. Pengambilan sampel tanaman untuk analisis dilakukan pada akhir masa vegetatif yaitu pada umur tanaman 30 HST. Penelitian ini dilaksanakan di Rumah Kaca Fakultas Pertanian Universitas Gadjah Mada pada Bulan Oktober 2021. Perlakuan yang diaplikasikan adalah biochar sekam padi dengan dosis 0 ton/ha, 10 ton/ha, 20 ton/ha, 40 ton/ha dan pupuk kandang kambing dengan dosis 0 ton/ha, 10 ton/ha, 20 ton/ha. Hasil penelitian menunjukkan adanya penambahan biochar sekam padi dan pupuk kandang kambing memberikan pengaruh beda nyata terhadap peningkatan pH, DHL, C-Organik, KPK, N total tanah, dan N total jaringan. Dari semua perlakuan yang diaplikasikan, perlakuan pupuk kandang kambing 20 ton/ha dan biochar sekam padi 40 ton/ha mampu meningkatkan pertumbuhan dan hasil tanaman kangkung.

Kata kunci : biochar, pupuk kandang, pasir, hara N, kangkung

## **Abstract**

This research aimed to determine the effect of rice husk biochar and goat manure fertilizer with different dosage toward to changing of soil chemical characteristics, plant growth, and absorption of N nutrients in soil and plant. Sample for plants analyses was taken at the end of the vegetative period at the age of 30 DAS. This research was conducted in greenhouse, agriculture faculty, Gadjah Mada University on October 2021. The applied treatments were rice husk biochar with a dosage of 0 tons/ha, 10 tons/ha, 20 tons/ha, 40 tons/ha and goat manure fertilizer with a dosage of 0 tons/ha, 10 tons/ha, 20 tons/ha. The results showed that the addition of rice husk biochar and goat manure fertilizer had a significant effect on increasing soil pH, electrical conductivity, organic-C, KPK, soil total N, and plant total N. From all the treatments applied, the treatment of 20 tons/ha goat manure fertilizer and 40 tons/ha rice husk biochar has the highest growth and yield of kang kong.

**Keywords :** biochar, manure fertilizer, sandy soils, N nutrient, kang kong