

ABSTRAK

Yuliana Sari. 2021. Peran Kombinasi Biochar Sekam Padi dengan Ragam Bokashi terhadap Peningkatan Efisiensi Pupuk NPK, Pertumbuhan serta Hasil Tanaman Jagung Manis (*Zea mays saccharata L.*) di Tanah Pasca Galian C. Dibawah bimbingan Cecep Hidayat dan Budy Frasetya.

Tanah pasca galian C memiliki tekstur tanah pasir, C-organik rendah serta hara rendah. Hal tersebut menyebabkan efisiensi pemupukan serta produksi tanaman jagung manis pada tanah pasca galian C juga rendah. Untuk mengatasinya dapat ditingkatkan melalui aplikasi tambahan berupa biochar sekam padi dengan ragam bokashi. Penelitian dilaksanakan pada bulan Januari- Juni 2021 di Desa Cibiru Wetan, Kecamatan Cileunyi, Kabupaten Bandung. Metode penelitian menggunakan Rancangan Acak Kelompok 14 perlakuan dengan 3 kali ulangan: A= Kontrol, B= 100% NPK, C= biochar + 25% NPK, D= biochar + 50% NPK, E= biochar + 75% NPK, F= biochar + paitan + 25% NPK, G= biochar + paitan+ 50% NPK, H= biochar + paitan + 75% NPK, I= biochar + jerami padi + 25% NPK, J= biochar + jerami padi + 50% NPK, K= biochar + jerami padi + 75% NPK, L= biochar + eceng gondok + 25% NPK, M = biochar + eceng gondok + 50% NPK, N= biochar + eceng gondok + 75% NPK. Hasil penelitian menunjukkan bahwa pemberian kombinasi biochar sekam padi dengan ragam bokashi berpengaruh terhadap parameter tinggi tanaman, luas daun, bobot tongkol berkelobot, bobot tongkol tanpa kelobot, hasil panen, indeks panen dan RAE. Pemberian kombinasi biochar sekam padi dengan ketiga ragam bokashi, baik bokashi paitan, jerami padi maupun eceng gondok dapat meningkatkan pertumbuhan dan hasil tanaman jagung manis dengan penurunan NPK hingga 75% di tanah pasca galian C.

Kata kunci: biochar sekam padi, bokashi paitan, jerami padi, eceng gondok, efisiensi NPK, tanah pasca galian C.

ABSTRACT

Yuliana Sari. 2021. The Role of Combination of Rice Husk Biochar with Bokashi Variety in Increasing the Efficiency of NPK Fertilizer, Growth and Yield of Sweet Corn (*Zea mays saccharata L.*) in Post-Excavation Soil C. Supervised by Cecep Hidayat and Budy Frasetya.

Post-excavation soil C has a sandy soil texture, low organic C and low nutrients. This causes the efficiency of fertilization and sweet corn production on post-excavated soil C also low. So, additional applications of rice husk biochar with bokashi variety are needed. The study was conducted in January-June 2021 in Cibiru Wetan Village, Cileunyi District, Bandung. The research method used a randomized block design with 14 treatments with 3 replications: A= control, B= 100% NPK, C= biochar + 25% NPK, D= biochar + 50% NPK, E= biochar + 75% NPK, F= biochar + *T. diversifolia* + 25% NPK, G= biochar + *T. diversifolia* + 50% NPK, H= biochar + *T. diversifolia* + 75% NPK, I= biochar + rice straw + 25% NPK, J= biochar + rice straw + 50% NPK, K= biochar + rice straw + 75% NPK, L = biochar + water hyacinth + 25% NPK, M = biochar + water hyacinth + 50% NPK, N = biochar + water hyacinth + 75% NPK. The results showed that the combination of rice husk biochar with bokashi variety affected on the parameters of plant height, leaf area, harvest index, cob weight, cob weight without husk, yield and RAE. Combining rice husk biochar with the three varieties of bokashi, both *Tithonia diversifolia*, rice straw and water hyacinth, can increase the growth and yield of sweet corn by decreasing NPK up to 75% in post-excavation soil C.

Keywords: rice husk biochar, *T. diversifolia*, rice straw, and water hyacinth bokashi, NPK efficiency, post-excavation soil C