KAJIAN TAKARAN KOMPOS ECENG GONDOK (*Eichhornia crassipes* (Mart.) Solms) TERHADAP SIFAT KIMIA ULTISOL DAN HASIL TANAMAN JAGUNG MANIS (*Zea mays* saccharata L.)

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ABSTRAK

Kompos eceng gondok gondok (*Eichhornia crassipes* (Mart.) Solms) merupakan bahan organik potensial yang dapat digunakan untuk memperbaiki sifat kimia Ultisol dan mendukung ketersediaan unsur hara bagi tanaman jagung manis. Penelitian ini bertujuan untuk mengkaji pengaruh pemberian berbagai takaran kompos eceng gondok (*Eichhornia crassipes* (Mart.) Solms) terhadap sifat kimia Ultisol dan hasil tanaman jagung manis (*Zea mays* saccharata L.). Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) yang terdiri dari 6 perlakuan (takaran kompos 0, 5, 10, 15, 20 dan 25 ton/ha) dengan 3 ulangan. Parameter analisis tanah yaitu pH (H_2O), Al-dd, C-organik, P-tersedia, N-total dan KTK. Parameter analisis kompos yaitu pH (H_2O), C-organik, P-total, N-total dan rasio C/N. Pengamatan tanaman berupa tinggi tanaman, bobot buah segar, serta total berat kering tanaman. Penambahan kompos eceng gondok mulai dari takaran 5 ton/ha sudah dapat memperbaiki sifat kimia Ultisol, seperti meningkatkan pH (H_2O), C-organik, P-tersedia, N-total, kadar KTK, serta menurunkan Al-dd tanah. Penambahan kompos eceng gondok mulai dari takaran 5 ton/ha juga mampu meningkatkan pertumbuhan tinggi tanaman, bobot buah segar, dan total berat kering tanaman jagung manis. Berdasarkan hasil penelitian ini, disarankan untuk menggunakan takaran kompos eceng gondok dengan takaran 5 ton/ha hingga 10 ton/ha, karena pada takaran tersebut sudah dapat memperbaiki sifat kimia Ultisol dan meningkatkan hasil tanaman jagung manis.

***Kata kunci**: Eceng Gondok, Jagung Manis, Kompos, Sifat Kimia Tanah, Ultisol*

STUDY ON WATER HYACINTH (*Eichhornia crassipes* (Mart.) Solms) COMPOST DOSAGE ON THE CHEMICAL PROPERTIES OF ULTISOL AND YIELD OF SWEET CORN (*Zea mays* saccharata L.)

ABSTRACT

Water hyacinth (*Eichhornia crassipes* (Mart.) Solms) compost is a potential organic material that can be used to improve the chemical properties of Ultisols and support the availability of nutrients for sweet corn growth. This study was aimed to examine the effect of various doses of water hyacinth (*Eichhornia crassipes* (Mart.) Solms) compost on the chemical properties of Ultisols and yield of sweet corn (*Zea mays* saccharata L.). This study used a Completely Randomized Design (CRD) consisting of 6 treatments (0, 5, 10, 15, 20 dan 25 tons/ha compost) with 3 replications. Soil analysis parameters were pH (H_2O), Al-exchangeable, organic-C, available-P, total-N and CEC. Compost analysis parameters were pH (H_2O), organic-C, total-P, total-N and C/N ratio. Plant parameters were plant height, fresh cob weight, and total dry weight of plants. The addition of water hyacinth compost starting from 5 tons/ha could improve the chemical properties of Ultisol, such as increasing pH, organic-C, available-P, total-N, CEC levels, and reducing soil Al-exchangeable. It also increased plant height, fresh cob weight, and total dry weight of sweet corn plants. Based on the results of this study, it was recommended to use water hyacinth compost at 5 to 10 tons/ha, because at this dose it could improve the chemical properties of Ultisol and increased sweet corn yields.

Keywords: *Compost, Soil Chemical Properties, Sweet Corn, Ultisol, Water Hyacinth*