

Ilham Pratama Putra 180311100121. Pengaruh Pemberian Pupuk Kandang Sapi dan Kompos Jerami Terhadap Serapan K, Pertumbuhan dan Produksi Jagung (*Zea mays* L.) di Vertisol. Pembimbing **Dr. Ir. Eko Murniyanto, M.P.**

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh pemberian pupuk kandang sapi dan kompos jerami terhadap serapan K, pertumbuhan dan produksi jagung (*Zea mays* L.) di Vertisol. Penelitian ini dilaksanakan di bulan November 2021 sampai April 2022, di lahan tegal jenis vertisol di desa Gili Timur, Kecamatan Kamal, Kabupaten Bangkalan Jawa Timur. Percobaan dirancang dengan Rancangan Acak Kelompok (RAK), perlakuan yang dicoba yaitu perlakuan tanpa pemberian pupuk kandang sapi dan kompos jerami dengan tanaman jagung hibrida Bisi-2 (P1), pemberian pupuk kandang sapi dengan tanaman jagung hibrida Bisi-2 (P2), pemberian kompos jerami dengan tanaman jagung hibrida Bisi-2 (P3), tanpa pemberian pupuk kandang sapi dan kompos jerami dengan tanaman jagung lokal Tambin (P4), pemberian pupuk kandang sapi dengan tanaman jagung lokal Tambin (P5), dan pemberian kompos jerami dengan tanaman jagung lokal Tambin (P6). Hasil penelitian menunjukkan bahwa pemberian pupuk kandang sapi dan kompos jerami berpengaruh terhadap K-total tanaman, serapan K, bobot kering tanaman, bobot kering akar dan bobot biji setiap tanaman pada jagung hibrida Bisi-2 dan jagung lokal Tambin, selain itu pemberian pupuk kandang sapi dan kompos jerami berpengaruh tidak nyata terhadap pH, KTK dan K-total tanah. Nilai luas bukaan stomata tertinggi pada P3 sebesar 67,39 μm^2 dan jumlah stomata terbanyak pada P1 sebanyak 122 stomata setiap mm^2 .

Kata kunci : Jagung, Pupuk kandang sapi, Kompos jerami, Serapan K, Pertumbuhan, Produksi

Ilham Pratama Putra 180311100121. *Effect of Cow Manure and Straw Compost on K Uptake, Growth and Production of Corn (Zea mays L.) in Vertisol.* Advisor **Dr. Ir. Eko Murniyanto, MP.**

ABSTRACT

This study aims to determine the effect of cow manure and straw compost on K uptake, growth and production of maize (Zea mays L.) in Vertisol. This research was carried out from November 2021 to April 2022, on a vertisol type of land in the village of Gili Timur, Kamal District, Bangkalan Regency, East Java. The experiment was designed using a Randomized Block Design (RAK), the treatments were treated without giving cow manure and straw compost with Bisi-2 hybrid corn (P1), giving cow manure with Bisi-2 hybrid corn (P2), giving cow manure with Bisi-2 hybrid corn (P2). straw compost with Bisi-2 hybrid corn (P3), without cow manure and straw compost with Tambin local corn plant (P4), cow manure with Tambin local corn plant (P5), and straw compost with corn plants local Tambin (P6). The results showed that the application of cow manure and straw compost had an effect on total plant K, K uptake, plant dry weight, root dry weight and seed weight of each plant in Bisi-2 hybrid corn and Tambin local corn, in addition to cow manure application. and straw compost had no significant effect on soil pH, CEC and K-total. The highest value of stomata opening area at P3 was 67.39 m^2 and the highest number of stomata at P1 was 122 stomata per mm^2 .

Key words : Corn, Cow manure, Straw compost, K uptake, Growth, Production