

ABSTRAK

Inceptisol merupakan jenis tanah marginal yang memiliki kandungan bahan organik rendah dan distribusi pori tidak seimbang. Kondisi ini menyebabkan daya dukung tanah terhadap pertumbuhan tanaman menjadi rendah. Salah satu upaya perbaikan adalah dengan penambahan bahan organik berupa kompos. Penelitian ini bertujuan untuk mengetahui pengaruh kompos campuran kotoran sapi dan hijauan gamal terhadap distribusi pori dan hasil tanaman kacang tanah pada Inceptisol. Penelitian dilaksanakan di Desa Tangkit, Kecamatan Sungai Gelam, Kabupaten Muaro Jambi, dari bulan Agustus hingga Desember 2024. Rancangan yang digunakan adalah Rancangan Acak Kelompok (RAK) dengan 5 perlakuan dosis (kontrol, 5, 10, 15, dan 20 ton/ha) dan 5 ulangan, sehingga terdapat 25 petak percobaan. Parameter yang diamati meliputi bahan organik tanah, bobot volume, total ruang pori, pori drainase cepat, pori drainase lambat, pori air tersedia, tinggi tanaman, dan hasil bobot polong kering kacang tanah. Hasil penelitian menunjukkan bahwa kompos campuran kotoran sapi dan hijauan gamal mampu memperbaiki sifat fisik tanah. Perlakuan 20 ton/ha meningkatkan bahan organik tanah hingga 8,52%, menurunkan bobot volume menjadi 1,37 g/cm³, meningkatkan total ruang pori menjadi 48,46%, meningkatkan pori drainase cepat menjadi 18,80%, pori air tersedia menjadi 10,56%, dan hasil kacang tanah meningkat sebesar 32,18% dibandingkan tanpa kompos.

Kata Kunci: *Inceptisol, Kompos Kotoran Sapi, Hijauan Gamal, Distribusi Pori, Kacang Tanah*

ABSTRACT

Inceptisol is a type of marginal soil that has low organic matter content and unbalanced pore distribution. This condition causes the soil's carrying capacity for plant growth to be low. One of the improvement efforts is by adding organic matter in the form of compost. This study aims to determine the effect of a mixture of cow dung and gamal greens compost on the pore distribution and yield of peanut plants on Inceptisol. The study was conducted in Tangkit Village, Sungai Gelam District, Muaro Jambi Regency, from August to December 2024. The design used was a Randomized Block Design (RAK) with 5 dose treatments (control, 5, 10, 15, and 20 tons/ha) and 5 replications, so that there were 25 experimental plots. The parameters observed included soil organic matter, volume weight, total pore space, fast drainage pores, slow drainage pores, available water pores, plant height, and dry weight of peanut pods. The results showed that a mixture of cow dung and gamal greens compost was able to improve soil physical properties. The treatment of 20 tons/ha increased soil organic matter by 8.52%, decreased the volume weight to 1.37 g/cm³, increased the total pore space to 48.46%, increased the rapid drainage pore to 18.80%, the available water pore to 10.56%, and the peanut yield increased by 32.18% compared to without compost.

Keywords: *Inceptisol, Cow Manure Compost, Gamal Greens, Pore Distribution, Peanuts.*