

INTISARI

Pengaruh Penambahan Serbuk Bata terhadap Pertumbuhan Rumput Gama Umami pada Alfisol Wonosari, Gunung Kidul

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan serbuk bata terhadap sifat tanah Alfisol, pertumbuhan, serta produktivitas tanaman Rumput Gama Umami, serta mengetahui dosis optimal dari penambahan bahan modifikasi atau rekayasa tanah berupa batu bata terhadap pertumbuhan tanaman. Pengambilan sampel tanah dilakukan pada sebelum tanam dan setelah panen. Pengambilan sampel tanaman dilakukan saat panen yaitu 65 HST. Penelitian ini dilakukan pada *planter bag* di lahan percobaan Kecamatan Wonosari, Kabupaten Gunungkidul, Yogyakarta dan analisis dilakukan pada laboratorium Fakultas Pertanian, Universitas Gadjah Mada. Rancangan penelitian yang digunakan yaitu Rancangan Acak Lengkap (RAL) 1 faktorial dengan 12 perlakuan dan 3 ulangan sehingga total semua 36 sampel. Amandemen yang diberikan yaitu pupuk kompos, pupuk NPK, serta 10 dosis bata yang berbeda. Hasil penelitian dianalisis uji ANOVA untuk dilihat perbedaan pengaruh antar perlakuan dan di uji lanjut dengan DMRT (*Duncan Multiple Range Test*). Hasil penelitian memperlihatkan bahwa serbuk bata berpengaruh dalam membenahi sifat fisik tanah terutama porositas serta permeabilitas sehingga meningkatkan penetrasi akar dan serapan hara pada tanaman Gama Umami di tanah Alfisol. Penambahan serbuk bata memberikan pengaruh signifikan terhadap beberapa parameter kimia, fisika, sifat agronomi, serta serapan hara.

Kata Kunci : alfisol, gama umami, serapan hara, serbuk bata, penetrasi akar

ABSTRACT

The Effect of Brick Powder Addition on the Growth of Gama Umami Grass on Alfisol in Wonosari, Gunung Kidul

This study aimed to determine the effect of brick powder addition on the properties of Alfisol soil, as well as on the growth and productivity of Gama Umami grass, and to identify the optimal dosage of soil modification or engineering material in the form of brick powder for plant growth. Soil samples were collected before planting and after harvest, while plant samples were collected at harvest, which was conducted 65 days after planting. The experiment was carried out in planter bags at the experimental field in Wonosari District, Gunungkidul Regency, Yogyakarta, and laboratory analyses were conducted at the Faculty of Agriculture, Universitas Gadjah Mada. The study employed a Completely Randomized Design (CRD) with one factor consisting of 12 treatments and 3 replications, resulting in a total of 36 samples. Soil amendments applied included compost, NPK fertilizer, and ten different doses of brick powder. Data were analyzed using ANOVA to evaluate differences among treatments, followed by the Duncan Multiple Range Test (DMRT) for mean comparison. The results showed that brick powder improved the physical properties of the soil, particularly porosity and permeability, thereby enhancing root penetration and nutrient uptake of Gama Umami grass grown on Alfisol. The addition of brick powder had a significant effect on several soil chemical, physical, and agronomic parameters, as well as nutrient absorption.

Key words: Alfisol, Gama Umami, nutrient uptake, brick powder, root penetration.