

RINGKASAN

Bawang merah merupakan salah satu komoditas hortikultura yang akan tumbuh baik pada tanah dengan kandungan bahan organik tinggi. Pemberian pupuk organik sangat diperlukan untuk mendapatkan produksi bawang merah yang tinggi. Limbah media tanam jamur akan mendukung pertumbuhan dan perkembangan tanaman dengan baik. Sumber bahan organik tanah lainnya yang cukup banyak tersedia yaitu pupuk kandang. Pupuk kandang sapi selain dapat meningkatkan ketersediaan unsur hara, juga dapat mendukung pertumbuhan mikroorganisme serta mendukung pertumbuhan mikroorganisme dan memperbaiki struktur tanah. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian limbah media tanam jamur kancing dan pupuk kandang sapi terhadap pertumbuhan dan hasil tanaman bawang merah pada tanah inceptisol serta mengetahui pengaruh interaksi limbah media tanam jamur kancing dan pupuk kandang sapi terhadap pertumbuhan dan hasil tanaman bawang merah.

Penelitian ini dilaksanakan di Laboratorium Agronomi dan Hortikultura Fakultas Pertanian, Laboratorium Ilmu Tanah Fakultas Pertanian, dan *screen house* Fakultas Pertanian, Universitas Jenderal Soedirman. Pelaksanaan kegiatan penelitian ini dimulai pada bulan Maret hingga September 2023. Rancangan penelitian ini menggunakan Rancangan Acak Kelompok Lengkap (RAKL) dengan dua faktor yaitu limbah kompos jamur kancing (L) dengan dosis 0, 20, dan 40 ton/ha, dan pupuk kandang sapi (K) dengan dosis 0, 15, dan 30 ton/ha. Kedua faktor dikombinasikan dan didapatkan 9 kombinasi perlakuan dengan 3 kali ulangan sehingga diperoleh 27 unit percobaan. Setiap unit percobaan terdiri atas 3 polibag. Variabel pengukuran meliputi pH (H_2O), C-Organik, tinggi tanaman, jumlah anakan, kehijauan daun, kadar klorofil, jumlah umbi, diameter umbi, bobot tanaman segar, bobot tanaman kering, bobot umbi segar, bobot umbi kering, dan indeks panen. Hasil pengukuran variabel tanaman dianalisis menggunakan analisis ragam (ANOVA) dan jika hasilnya berbeda nyata maka dilanjutkan dengan uji DMRT pada taraf kesalahan 5%.

Hasil penelitian ini menunjukkan bahwa dosis limbah media tanam jamur dapat meningkatkan variabel jumlah anakan dan kehijauan daun. Namun pemberian dosis limbah media tanam jamur menurunkan pH tanah dan jumlah umbi. Pemberian limbah media tanam jamur 20 ton/ha memberikan hasil yang cenderung meningkat terhadap bobot umbi segar, bobot umbi kering dan diameter umbi, serta dosis 40 ton/ha pada variabel kadar klorofil. Perlakuan dosis pupuk kandang sapi dapat meningkatkan kehijauan daun. Pemberian pupuk kandang sapi 15 ton/ha memberikan hasil yang cenderung meningkat terhadap bobot tanaman segar serta dosis 30 ton/ha memberikan hasil yang cenderung meningkat terhadap pH tanah, dan tinggi tanaman. Tidak terdapat interaksi antara limbah media tanam jamur dan pupuk kandang sapi pada semua variabel.

SUMMARY

Shallot is one of the horticultural commodities that will grow well in soil with high organic matter content. The provision of organic fertilizer is very necessary to get high shallot production. Mushroom growing media waste will support plant growth and development well. Another source of soil organic matter that is quite widely available is manure. In addition to increasing the availability of nutrients, cow manure can also support the growth of microorganisms and support the growth of microorganisms and improve soil structure. This study aims to determine the effect of button mushroom planting media waste and cow manure on the growth and yield of shallot plants on inceptisol soil and to determine the effect of the interaction of button mushroom planting media waste and cow manure on the growth and yield of shallot plants.

This research was conducted at the Agronomy and Horticulture Laboratory, Faculty of Agriculture, Soil Science Laboratory, Faculty of Agriculture, and screen house, Faculty of Agriculture, Universitas Jenderal Soedirman. The implementation of this research activity began in March to September 2023. The research design used a Randomized Complete Group Design (RAKL) with two factors, namely button mushroom compost waste (L) with doses of 0, 20, and 40 tons/ha, and cow manure (K) with doses of 0, 15, and 30 tons/ha. The two factors were combined and obtained 9 treatment combinations with 3 replications, resulting in 27 experimental units. Each experimental unit consisted of 3 polybags. Measurement variables included pH (H₂O), C-Organic, plant height, number of tillers, leaf greenness, chlorophyll content, number of tubers, tuber diameter, fresh plant weight, dry plant weight, fresh tuber weight, dry tuber weight, and harvest index. The measurement results of plant variables were analyzed using analysis of variance (ANOVA) and if the results were significantly different then continued with the DMRT test at the 5% error level.

The results of this study indicate that the dose of mushroom growing media waste can increase the variable number of tillers and leaf greenness. However, the dose of mushroom planting media waste decreased soil pH and the number of tubers. Giving 20 tons/ha of mushroom planting media waste gives results that tend to increase the fresh tuber weight, dry tuber weight and tuber diameter, and the dose of 40 tons/ha on the variable chlorophyll content. Treatment of cow manure doses can increase the greenness of the leaves. The application of cow manure 15 tons/ha gives results that tend to increase on fresh plant weight and a dose of 30 tons/ha gives results that tend to increase on soil pH, and plant height. There was no interaction between mushroom growing media waste and cow manure on all variables.