

RINGKASAN

Bawang merah merupakan komoditas sayuran bumbu utama dan tidak dapat diganti dengan bahan lain. Faktor-faktor yang mempengaruhi pertumbuhan dan produktivitas tanaman bawang merah yaitu jenis tanah, kelembaban udara, pH tanah, pasokan air, sinar matahari, perlakuan, aplikasi pupuk dan obat-obatan, serta pengendalian hama dan penyakit pada tanaman. Media tanam yang digunakan adalah tanah Inceptisol. Penelitian ini bertujuan untuk: (1) menentukan dosis optimum dan pengaruh dosis kompos limbah baglog jamur terhadap kesuburan tanah Inceptisol, pertumbuhan dan hasil tanaman bawang merah (2) menentukan dosis optimum dan pengaruh dosis pupuk kandang sapi terhadap kesuburan tanah Inceptisol, pertumbuhan dan hasil tanaman bawang merah (3) mendapatkan informasi mengenai respon pertumbuhan dan hasil tanaman bawang merah pada berbagai dosis kompos limbah baglog jamur dan pupuk kandang sapi.

Penelitian dilakukan di *screen house* Fakultas Pertanian Universitas Jenderal Soedirman serta Laboratorium Tanah dan Sumber Daya Lahan. Penelitian ini berlangsung dari Maret hingga September 2023. Rancangan penelitian yang digunakan adalah rancangan acak kelompok lengkap (RKAL) dengan dua kombinasi faktor, yaitu dosis kompos limbah baglog jamur (L) dengan dosis 0, 20, dan 40 ton/ha, dan dosis kotoran sapi (K) dengan dosis 0, 15, dan 30 ton/ha. Setiap perlakuan terdiri atas 3 ulangan, sehingga total percobaan sebanyak 27 unit percobaan. Variabel yang diamati, antara lain pH H₂O, pH KCl, DHL, KTK, C-organik, N-total, N-tersedia, P-total, P-tersedia, K-total, K-tersedia, tinggi tanaman, kehijauan daun, N-serapan daun, berat umbi segar, dan berat umbi kering. Pengamatan dianalisis dengan *Analysis of Variance* (ANOVA) pada tingkat kesalahan 5 % dan jika perbedaannya nyata, dilakukan pengujian lanjutan dengan *Duncan Multiple Range Test* (DMRT) pada tingkat kesalahan 5%.

Berdasarkan hasil penelitian menunjukkan bahwa pemberian kompos limbah baglog jamur dapat meningkatkan pH H₂O, DHL, N-total, K-total dan K-tersedia. Pemberian pupuk kandang sapi meningkatkan N-total, P-tersedia dan K-tersedia. Terdapat interaksi pemberian kompos limbah baglog jamur dan pupuk kandang sapi terhadap K-tersedia dengan kombinasi 20 ton/ha kompos limbah baglog jamur dan 15 ton/ha pupuk kandang sapi karena menghasilkan K-tersedia tertinggi.

SUMMARY

Shallots are the main seasoning vegetable commodity and cannot be replaced with other ingredients. Factors that affect the growth and productivity of onion plants are soil type, air humidity, soil pH, water supply, sunlight, treatment, application of fertilizers and drugs, and pest and disease control in plants. The growing medium used is Inceptisol soil. This study aims to: (1) determine the effect of the dose of mushroom baglog waste compost on the soil fertility of Inceptisol, the growth and yield of onion plants, and to obtain the optimal dose. (2) determine the effect of cow manure dosage on soil fertility of Inceptisol, growth and yield of shallot plants, and obtain the optimal dose. (3) determine the effect of the interaction between the dose of mushroom baglog waste compost and the dose of cow manure, as well as obtain the best form of treatment.

The research was conducted at the screen house of the Faculty of Agriculture, Jenderal Soedirman University and the Soil and Land Resources Laboratory. The study runs from March to September 2023. The research design used was a complete group randomized design, with two combinations of factors, namely the dose of mushroom baglog waste compost (L) with doses of 0, 20, and 40 tons / ha, and the dose of cow manure (K) with doses of 0, 15, and 30 tons / ha. Each treatment consists of 3 repeats, bringing the total trial to 27 experimental units. Variables observed included pH H₂O, pH KCl, DHL, CEC, C-organic, N-total, N-available, P-total, P-available, K-total, K-available, Plant height, leaf greenness, N-leaf uptake, weight of fresh tubers, and weight of dried tubers. Observations were analyzed with Analysis of Variance (ANOVA) at an error rate of 5 % and if the effect was real, further tests were carried out with the Duncan Multiple Range Test (DMRT) at an error rate of 5%.

Based on the results of the study showed that composting mushroom baglog waste can increase the pH of H₂O, DHL, N-total, K-total and K-available. Application of cow manure increases N-total, P-available and K-available. There is an interaction of composting baglog waste mushrooms and cow manure against K-available with the best combination in 20 tons/ha of mushroom baglog waste compost and 15 tons/ha of cow manure.