

Intisari

Penelitian ini bertujuan untuk mengetahui pengaruh pemberian kombinasi amandemen dan dosis pupuk KCl terhadap sifat tanah, pertumbuhan dan produktivitas bawang merah, serta serapan K bawang merah pada tanah Entisol dan Vertisol. Pengambilan sampel tanah dilakukan pada awal sebelum tanam, setelah inkubasi, dan setelah panen. Pengambilan sampel tanaman dilakukan pada saat tanaman siap panen yaitu 8 MST. Penelitian dilakukan di Rumah Kaca, Tirtomulyo, Kretek, Bantul serta dilakukan uji laboratorium di Fakultas Pertanian, Universitas Gadjah Mada. Rancangan penelitian yang digunakan adalah Rancangan Acak Lengkap (RAL) 3 faktor dengan 18 perlakuan dan 3 kali ulangan sehingga total 54 sampel. Amandemen tanah yang diberikan yaitu arang sekam padi, pupuk kandang sapi, serta mikoriza. Perlakuan pemberian amandemen terdiri dari 3 taraf yaitu tanpa amandemen (A0), arang sekam padi + pupuk kandang sapi (A1), dan arang sekam padi + pupuk kandang sapi + mikoriza (A2). Dosis pupuk KCL yang digunakan terdiri dari 3 taraf yaitu 100 kg/ha, 200 kg/ha, dan 300 kg/ha. Hasil penelitian menunjukkan bahwa dengan penambahan kombinasi amandemen berupa arang sekam padi, pupuk kandang dan mikoriza (A2) mampu memberikan hasil terbaik untuk peningkatan kandungan C-organik, bahan organik, KPK, dan K tersedia tanah. Penambahan arang sekam padi dan pupuk kandang (A1) serta dosis pupuk KCl 100 kg/ha mampu meningkatkan kadar dan serapan hara K pada tanaman bawang merah.

Kata kunci : arang sekam padi, pupuk kandang sapi, mikoriza, pupuk KCl, bawang merah, entisol, vertisol

Abstract

This research aims to determine the effect of a combination of amendments and KCl fertilizer doses on soil properties, shallot growth and productivity, and shallot K uptake in Entisol and Vertisol soils. Soil sampling is done at the beginning before planting, after incubation, and after harvest. Plant sampling was done when the plants were ready to harvest 8 weeks after planting. The research was conducted in Greenhouse, Tirtomulyo, Kretek, and Bantul, and laboratory tests were conducted at the Faculty of Agriculture, Gadjah Mada University. The research design used was a 3-factor Completely Randomized Design (CRD) with 18 treatments and 3 replications for 54 samples. The soil amendments given were rice husk charcoal, cow manure, and mycorrhiza. The amendment treatment consisted of 3 levels: no amendment (A0), rice husk charcoal + cow manure (A1), and rice husk charcoal + cow manure + mycorrhiza (A2). The dosage of KCL fertilizer used consisted of 3 levels, namely 100 kg/ha, 200 kg/ha, and 300 kg/ha. The results showed that the addition of a combination of amendments in the form of rice husk charcoal, manure, and mycorrhiza (A2) was able to provide the best results for increasing the content of C-organic, organic matter, KPK, and K available in the soil. The addition of rice husk charcoal and manure (A1) and a dose of KCl fertilizer of 100 kg/ha was able to increase the levels and uptake of K nutrients in shallot plants.

Key words: rice husk charcoal, cow manure, mycorrhiza, KCl fertilizer, shallots, entisol, vertisol