

Intisari

Pemanfaatan lahan marginal pasir pantai sebagai lahan pertanian memerlukan upaya peningkatan kesuburan tanah dan peningkatan unsur hara terutama nitrogen untuk mendukung pertumbuhan tanaman. Penelitian ini bertujuan untuk mengetahui pengaruh dan kombinasi dosis terbaik pupuk kandang sapi dan urea terhadap ketersediaan N tanah, dan pertumbuhan serta serapan N sawi hijau di entisol Pantai Samas, Bantul. Penelitian dilakukan di Rumah Kaca Fakultas Pertanian Universitas Gadjah Mada pada Oktober-November 2021. Pengambilan sampel tanaman dilakukan ketika vegetatif maksimum yaitu 33 HST. Penelitian dilakukan dengan menggunakan Rancangan Acak Lengkap (RAL) kombinasi 3 perlakuan pupuk kandang sapi dan 4 perlakuan urea, kemudian dilakukan sebanyak 3 ulangan. Kombinasi perlakuan dosis pupuk yaitu pupuk kandang sapi 0 ton/ha, 10 ton/ha, dan 15 ton/ha dengan urea 0 kg/ha, 100 kg/ha, 150 kg/ha dan 200 kg/ha. Hasil penelitian menunjukkan penambahan dosis kombinasi pupuk kandang sapi dan urea dapat meningkatkan dan menurunkan pH tanah, meningkatkan DHL, C-organik, KPK, dan Nitrogen total tanah. Perlakuan dosis pupuk kandang sapi 15 ton/ha dan pupuk urea 200 kg/ha memberikan pengaruh paling tinggi terhadap pertumbuhan dan serapan N sawi hijau.

Kata Kunci: entisol, hara N, pupuk kandang sapi, sawi hijau, urea.

Abstract

Utilization of marginal coastal sand land as agricultural land requires efforts to increase soil fertility and increase nutrients especially nitrogen to support the growth of crops. The purpose of this research was to determine the effect and combination of the best dose of cow manure and urea on the availability of soil N, and the growth and N uptake of mustard greens in entisol of Samas Beach, Bantul. The study was conducted at The Greenhouse of the Faculty of Agriculture, Gadjah Mada University, in October-November 2021. Sampling of plants was carried out when the maximum vegetative was 33 DAP. The study was conducted using a completely randomized design (CRD) with 3 treatments of cow manure and 4 treatments of urea, then carried out with 3 replications. The combination of fertilizer dosage treatments were cow manure 0 tons/ha, 10 tons/ha, and 15 tons/ha with urea 0 kg/ha, 100 kg/ha, 150 kg/ha and 200 kg/ha. The results of this study showed that the addition of a combination dose of cow manure and urea can increased and decreased soil pH, increased EC, organic C, CEC, and total soil Nitrogen. The treatment of cow manure 15 tons/ha and urea 200 kg/ha gave the highest effect on the growth and N uptake of mustard greens.

Key words: cow manure, entisol, mustard greens, N nutrient, urea.