Intisari

PENGARUH ARANG KAYU DAN PUPUK KANDANG SAPI TERHADAP KETERSEDIAAN N DAN PORI PENYIMPAN LENGAS PADA BIBIT TEH DI KEBUN PAGILARAN

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Penelitian ini bertujuan untuk mengetahui pengaruh pemberian arang kayu dan pupuk kandang sapi terhadap ketersediaan hara nitrogen dan pori penyimpan lengas tanah pada bibit teh. Rancangan penelitian yang digunakan adalah Rancangan Acak Lengkap (RAL) dengan tiga ulangan. Data penelitian diperoleh dari pengamatan di kebun dan analisis laboratorium. Data pengamatan di kebun berupa data agronomi yaitu tinggi tanaman dan jumlah daun, sedangkan data analisis laboratorium berupa data hasil analisis kimia-fisika tanah awal dan setelah perlakuan, sifat pupuk kandang sapi, sifat kimia arang kayu, dan analisis jaringan tanaman teh. Penambahan arang kayu dan pupuk kandang sapi secara nyata mampu meningkatkan sifat fisika dan kimia tanah yaitu pH aktual, pH potensial, bahan organik, C-Organik, KPK, pori penyimpan lengas, kadar air pada kapasitas lapang dan kadar NH_4^+ serta kadar NO_3^- tanah pada akhir percobaan. Kadar NH_4^+ tertinggi terdapat pada perlakuan P (pupuk kandang sapi 2%) sebesar 2,23 mg/kg dan kadar NO_3^- tertinggi pada perlakuan NPB1 (NPK+pupuk kandang sapi 2%+arang kayu 1%) sebesar 4,37 mg/kg. Kadar serapan N tanaman tertinggi terdapat pada perlakuan NP (NPK+pupuk kandang sapi 2%). Sedangkan nilai lengas tersedia tertinggi terdapat pada perlakuan NPB2 (NPK+pupuk kandang sapi 2%+arang kayu 2%) sebesar 13,84%.

Kata kunci : ammonium , arang kayu, lengas , nitrat, pupuk kandang sapi

Abstract

THE EFFECTS OF CHARCOAL AND COW MANURE TO THE AVAILABILITY OF N AND SOIL MOISTURE STORAGE PORES ON TEA SEEDS IN PAGILARAN GARDEN

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This research was aimed to determine the effects of charcoal and cow manure on nitrogen nutrient availability and soil moisture storage pores on tea seeds. The experimental design used was completely randomized design (CRD) with three replications. The research data were obtained from the observation data at garden and laboratory analysis data which were processed to obtain the value of the final outcome from the research. Observation data at garden form of data agronomy were plant height and number of leaves, while the data of laboratory analysis form of the chemical and physics of soil -start and after the treatment, the nature of cow manure, chemical characteristics of charcoal, and the tea plant tissue analysis. Addition of charcoal and cow manure significantly able to improve the physical and chemical properties of soil pH is actual, pH potential, organic matter, C-Organic, KPK, pore storage moisture, moisture content at field capacity and levels of NH_4^+ and the levels of NO_3^- ground at the end trial. NH_4^+ levels highest in P treatment (cow manure 2%) was 2.23 mg/kg and the highest levels of NO_3^- in NPB1 treatment (NPK+cow manure 2%+charcoal 1%) was 4.37 mg/kg. The highest levels of N uptake in the NP treatment (NPK + cow manure 2%). While the value of available moisture was highest in the NPB2 (NPK+cow manure 2%+charcoal 2%) treatment amounted to 13.84%.

Keywords: ammonium, charcoal, cow manure, humid, nitrate