

Ratna Sari Rahmawati. Kajian Pengolahan Tanah dan Tanaman Yang Berbeda Terhadap Sifat Fisik dan kimia Andisol Di Desa Krinjing Watumalang Wonosobo. Dibimbing oleh AZ. Purwono Budi Santosa dan Lelanti Peniwiratri.

ABSTRAK

Pengolahan tanah yang umumnya dilakukan di daerah Desa Krinjing, Kecamatan Watumalang, Kabupaten Wonosobo, adalah pengolahan tanah searah lereng tidak memperhatikan kaidah konservasi tanah yang benar sehingga menyebabkan tanah di daerah penelitian mudah terjadi erosi dan menghambat pertumbuhan tanaman. Penelitian dilaksanakan pada bulan Oktober 2012– Januari 2013. Tujuan dari penelitian ini adalah mengetahui pengaruh pengolahan tanah dan tanaman yang berbeda terhadap sifat fisik dan kimia. Penelitian menggunakan lahan percobaan dengan Rancangan Strip Plo, dengan 4 kombinasi perlakuan dengan 3 ulangan. Berikut adalah 4 kombinasi perlakuan, yaitu : A1B1 = tanaman cabai pada pengolahan searah lereng, A1B2 = tanaman cabai pada pengolahan memotong lereng, A2B1 = tanaman loncang pada pengolahan searah lereng, A2B2 = tanaman loncang pada pengolahan memotong lereng. Parameter yang diamati meliputi tekstur tanah, berat volum, berat jenis, porositas tanah, permeabilitas, karakteristik lengas, pH tanah, C organik, penetapan N tersedia, penetapan K tersedia, dan penetapan P tersedia. Analisa tanah dilaksanakan Analisis tanah dilaksanakan di Laboratorium BPTP (Balai Pengkajian Teknologi Pertanian) Yogyakarta, Laboratorium Fakultas pertanian UPN "Veteran" Yogyakarta, dan Laboratorium Balai Penelitian Tanah Bogor. Analisis data yang digunakan untuk membandingkan sifat fisik dan kimia tanah pada pengolahan tanah memotong lereng dan searah lereng yaitu dengan metode Analisis Varian (*anova*). Analisis antar perlakuan diuji keragamannya pada taraf nyata 5%. Hasil penelitian menunjukkan Pengolahan tanah berpengaruh terhadap pori drainase cepat, pori drainase lambat dan tinggi tanaman. Pada pengolahan tanah memotong lereng, nilai pori drainase cepat, pori drainase lambat dan tinggi tanaman tergolong lebih besar di bandingkan pada pengolahan tanah searah lereng. Jenis tanaman berpengaruh terhadap porositas, pori air tersedia dan N-tersedia di dalam tanah. Pada jenis tanaman loncang nilai porositas, pori air tersedia dan N-tersedia lebih besar di bandingkan pada tanaman cabai.

Kata kunci : Pengolahan tanah, Sifat fisik dan kimia Andisol.

Ratna Sari Rahmawati. Study of Tillage and Differently Plant for Physical and Chemical Andisol Character In The Krinjing Watumalang Wonosobo. Advisor Committee : AZ. Purwono Budi Santosa and Lelanti peniwiratri.

ABSTRACT

The generally of tillage performed in the Krinjing, Watumalang, Wonosobo is the direction of slope tillage and don't use the soil conservation with the great, so that it in the area of study susceptible to erosion and inhibit plant growth. The purpose of this study were to determine the influence of tillage and differently plant to the physical and chemical character. The research used field trials with Strip Plot Design. Land research consisted of 3 replications. Treatment consisted of 4 combinations of treatment, such as A1B1 = papper plant on the direction of slope tillage, A1B2 = papper plant on the cut of slope tillage, A2B1 = allium plant on the direction of slope tillage, A2B2 = allium plant on the cut of slope tillage. Parameter observed soil texture, heavy volume, density, soil porosity, permeability, moisture characteristics, soil pH, C-organic, N-available, K-available and P-available determination. The analysis of soil conducted in the Laboratory of BPTP (Assessment Institute for Agricultural Technology) Yogyakarta, Faculty of Agriculture UPN "Veteran" Yogyakarta Laboratory, and Bogor ISRI Laboratory. The analysis used to compare the physical and chemical character of the cut of slope tillage and direction of slope tillage by the variant analysis method (ANOVA). The analysis of variance between treatments were tested at 5% significance level. The results showed an effect of tillage on rapid drainage pore, slow drainage pore and height plant. At the cut of slope tillage, rapid drainage and slow drainage pores of high and height plant better great than the direction of slope tillage. Plant species affect on the porosity, water available pore and N-available. Allium plant have porosity, water available pore and N-available larger than papper plant.

Keywords: Tillage, physical and chemical character of Andisol.