KARAKTERISTIK BEBERAPA SIFAT FISIKA TANAH PADA TIGA TIPE PENGGUNAAN LAHAN PERTANIAN KECAMATAN X KOTO KABUPATEN TANAH DATAR

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ABSTRAK

Penelitian mengenai karakteristik beberapa sifat fisika tanah pada tiga tipe penggunaan lahan pertanian telah dilaksanakan di Kecamatan X Koto Kabupaten Tanah Datar dari bulan Januari hingga Oktober 2018. Tujuan penelitian adalah untuk menentukan karakteristik beberapa sifat fisika tanah pada tiga tipe penggunaan lahan pertanian di Kecamatan X Koto Kabupaten Tanah Datar. Penelitian dilaksanakan dengan metoda survei. Sampel tanah utuh, terganggu, dan agregat utuh diambil berdasarkan tiga tipe penggunaan lahan yang terdiri dari lahan hortikultura yang dirotasikan dengan tanaman hortikultura lainnya (cabai-tomat), lahan sawah yang dirotasikan dengan lahan hortikultura (padi-kol) dan lahan sawah tanpa rotasi (padi-padi). Masing-masing penggunaan lahan dibuat lubang profil untuk pengamatan sifat fisika tanah di lapangan dan diambil sampel tanah pada kedalaman 0-10 cm, 10-20 cm, 20-30 cm, 30-40 cm, dan 40-50 cm sebanyak tiga kali ulangan sehingga total sampel menjadi 45 sampel tanah. Parameter yang diamati yaitu bahan organik, tekstur, berat volume, total ruang pori, permeabilitas, dan indeks stabilitas agregat. Hasil penelitian menunjukkan karakteristik beberapa sifat fisika tanah berbeda pada setiap penggunaan lahan. Bahan organik tanah tergolong tinggi pada kedalaman 10-20 cm di lahan A (cabai-tomat) dan lahan B (padi-kol). Tekstur tanah didominasi lempung berpasir di lahan A (cabai-tomat) dan B (padi-kol), dan liat di lahan C (padi-padi). Berat volume dan total ruang pori tergolong kriteria sedang pada setiap penggunaan lahan. Laju permeabilitas tergolong kriteria sangat cepat hingga lambat, dan indeks stabilitas agregat tanah tergolong tidak mantap.

Kata kunci: sifat fisika tanah, kecamatan x koto, penggunaan lahan

IDENTIFICATION OF SOIL PHYSICS PROPERTIES ON THREE TYPES OF AGRICULTURAL LAND IN X KOTO SUB-DISTRICT TANAH DATAR REGENCY

ABSTRACT

A research on identification of several soil physics properties on three types of agricultural land use was carried out in X Koto Sub-District Tanah Datar Regency from January to October 2018. The purpose of this study was to determine some soil physical properties on three types of agricultural land use in X Koto Sub-District Tanah Datar Regency. The research was conducted using survey method. Undisturbed, disturbed, and undisturbed aggregates of soil samples were taken from three types of land use consisting of rotation of horticultural crops (chili-tomato), rice fields and horticultural crops (rice-cabbage) and unrotated rice fields (rice-rice). Soil profile was made and identified in each type of land use to observe the physical properties of the soil in the field. Soil samples were taken at a depth of 0-50 cm with 10 cm interval having three replications, so there were 45 total soil samples. The parameters observed were soil organic matter, texture, bulk density, total pore space, permeability, and aggregate stability index. The results showed that the identificaton of several physics properties of the soil were different in each land use. Soil organic matter content was classified high at a depth of 10-20 cm in chili-tomato and paddy-cabbage rotation. The soil texture was dominated by sandy loam on chili-tomato and rice-cabbage, and clayey in rice-rice rotation. The bulk density and the total pore space of the soil were classified into moderate criteria for each land use. Permeability rates were classified into very fast to slow criteria, and the soil aggregate stability index was classified as unsteady.

Keywords: soil physical properties, X Koto sub-district, land use type