

**LAHAN HUTAN, LADANG, DAN PEKARANGAN PEMUKIMAN  
DI DESA PITU, KAB. NGAWI, JAWA TIMUR**

Oleh :

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**INTISARI**

Lahan hutan, lahan ladang dan lahan pekarangan pemukiman adalah penggunaan lahan yang dominan di Desa Pitu. Penggunaan lahan dan pengolahan lahan yang berbeda berpotensi mengganggu penutupan lahan dan laju infiltrasi. Tujuan dari penelitian ini adalah untuk mengetahui kapasitas infiltrasi, kondisi penutupan lahan dan sifat fisik kimia tanah, serta hubungan kapasitas infiltrasi dengan sifat fisik kimia tanah pada masing-masing tipe penggunaan lahan di Desa Pitu, Kabupaten Ngawi, Jawa Timur.

Struktur vegetasi diselidiki dengan nested sampling dan diagram profil. Profil vegetasi digambarkan menggunakan software SExI - FS. Sampel tanah terusik diambil menggunakan soil ring sample, untuk analisis berat volume, berat jenis, dan porositas tanah. Sampel tanah tidak terusik diambil menggunakan sekop, untuk analisis tekstur, struktur, dan bahan organik tanah. Analisis tanah dilakukan di Laboratorium Tanah, Fakultas Teknologi Pertanian. Pengukuran infiltrasi menggunakan double ring infiltrometer, kemudian dilakukan analisis menggunakan rumus Horton untuk mengetahui nilai kapasitas infiltrasi.

Berdasarkan hasil penelitian, dapat diketahui bahwa nilai rata-rata kapasitas infiltrasi pada lahan hutan 12 mm/jam dengan penutupan tajuk 65%, struktur tanah remah, tekstur tanah lempung, porositas tanah berkisar antara 41,35% - 54,45%, dan bahan organik tanah berkisar antara 2,43% - 4,29%. Rata-rata kapasitas infiltrasi pada lahan ladang sebesar 72 mm/jam dengan struktur tanah remah, granuler, tekstur tanah lempung, porositas tanah berkisar antara 51,33% - 54,89%, dan bahan organik tanah berkisar antara 2,61% - 4,99%. Dan rata-rata kapasitas infiltrasi pada lahan pekarangan pemukiman sebesar 20 mm/jam dengan struktur tanah lempeng, gumpal, tekstur tanah lempung, porositas tanah berkisar antara 42,01% - 50,26%, dan bahan organik tanah berkisar antara 3,77% - 4,22%.

Kata kunci: lahan hutan, lahan ladang, lahan pekarangan pemukiman, sifat fisik tanah, infiltrasi

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FOREST LANDS, AGRICULTURALS, AND RESIDENTIAL YARDS

AT PITU VILLAGE, NGAWI REGENCY, EAST JAVA

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**ABSTRACT**

Forest, agricultural and residential yards are the dominant types of land use in Pitu village. The varying usage and management of land occupation have the potential to disrupt land cover and the rate of infiltration. The aim of this study is to determine the infiltration capacity, land cover condition and physicochemical properties of soil, in addition to the relationship between infiltration capacity and physicochemical properties of soil in each type of land use in Pitu village, Ngawi Regency, East Jawa.

Vegetation structure are analyzed using nested sampling and profile diagram method. Vegetation profile is illustrated using SExI - FS software. The affected land are sampled using soil ring sampler for the analysis of volumetric weight, specific weight, and soil porosity. The unaffected land are sampled using shovel for the analysis of texture, structure and soil organic matter. The analyzation of soil is done at Soil Laboratory, Faculty of Agricultural Technology, University of Gadjah Mada. The measurement is done using a double ring infiltrometer, followed by statistical analysis using Horton's formula to determine the infiltration capacity.

Results from the study showed that the average value of infiltration capacity of forest land is 12mm/hour with 65% of crown cover, with the crumbs soil structure, clay soil texture, soil porosity ranges from 41.35% - 54.45%, and soil organic matter ranges from 2.43% - 4.29%. The average infiltration capacity of agricultural is 72mm/hour with the crumbs, granular soil structure, clay soil texture, soil porosity ranges from 51,33% - 54,89%, and soil organic matter ranges from 2,61% - 4,99%. The average infiltration capacity of residential yard is 20mm/hour with the slab, blocky soil structure, clay soil texture, soil porosity ranges from 42.01% - 50.26%, and soil organic matter ranges from 3.77% - 4.22%.

Keywords: forest land, agricultural land, residential land, soil physical properties, infiltration

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