

INDRA PRADANA. KAJIAN POTENSI INFILTRASI PADA VARIASI JARAK DARI GARIS PANTAI DI DESA PLOSO KECAMATAN PACITAN PROVINSI JAWA TIMUR. Di bawah bimbingan Ir. H. Lanjar Sudarto, MT., dan Ir. Dyah Arbiwati, MP.

ABSTRAK

Lahan pantai yang didominasi oleh fraksi pasir mempunyai kemampuan menyimpan air yang sangat kecil, air merupakan masalah utama pada lahan tersebut. Tata Air perlu mempertimbangkan adanya usaha konservasi air. Salah satu usaha konservasi air adalah pengelolaan air permukaan dengan cara meningkatkan kapasitas infiltrasi. Tujuan dari penelitian ini untuk mengkaji potensi infiltrasi air pada variasi jarak dari garis pantai, pada jarak 500, 1000, dan 1500 meter dari garis pantai. Penelitian ini dilakukan di Desa Ploso Kecamatan Pacitan Kabupaten Pacitan Jawa Timur. Penelitian menggunakan metode survey dan purposif. Penentuan lokasi pengambilan sampel berdasarkan variasi jarak dari garis pantai. Parameter penelitian meliputi porositas, permeabilitas, tekstur tanah, dan karakteristik lengas (pF_1 ; pF_2 ; $pF_{2,54}$; $pF_{4,2}$). Dari hasil penelitian dapat disimpulkan bahwa: (1) Potensi infiltrasi pada jarak 500 m dan 1000 m lebih besar dibandingkan jarak 1500 m, (2) Sifat fisik pada jarak 1500 m dari garis pantai lebih baik dibandingkan jarak 500 m dan 1000 m baik dari tekstur tanah, kandungan bahan organik, distribusi ukuran pori, pori drainase, pori air tersedia, dan permeabilitas tanah, (3) Penggunaan lahan dan pengolahan tanah pada masing-masing variasi jarak berpengaruh terhadap beberapa sifat fisik tanah sehingga mempengaruhi juga terhadap laju infiltrasi tanah.

Kata kunci: Infiltrasi, Sifat fisik, Lahan pasir pantai.

INDRA PRADANA. STUDY OF INFILTRATION POTENCY IN VARIATION OF DISTANCE FROM COASTLINE, PLOSO VILLAGE, PACITAN SUB DISTRICT, EAST JAVA PROVINCE. Supervised by Ir. Lanjar Sudarto, MT and Ir. Dyah Arbiwati, MP.

ABSTRACT

The coastal land dominated by sand fraction has less capability to hold water, therefore water is the main problem in this area. Water management needs to consider the water conservation efforts. One of the water conservation efforts is to manage the surface water by improving infiltration capacity. The objective of this research was to study the infiltration potency at distance variation of 500 m, 1000 m, and 1500 m from coastline. This research was conducted in Ploso village, Pacitan sub district, East Java province. This research used survey and purposive methods. The sampling location was based on distance variation from coastline. The parameters to be observed were porosity, permeability, soil texture and soil moisture characteristic (pF 1; pF 2; pF 2,54; pF 4,2). The result showed that: (1) the infiltration rate potency at 500 m and 1000 m distances were higher than the potency infiltration at 1500 m distance, (2) Some physical properties such as soil texture, organic matters, pore size distribution, pore drainage, water pore available, and permeability at 1500 m distance were better than the properties at 500 m and 1000 m distance from coastline, (3) Land use and soil tillage at each distance variation affected on some soil properties and in turn it also affected on infiltration.

Keywords: Infiltration, Physical properties, Coastal land.