

**DISTRIBUSI PORI TANAH PADA BEBERAPA KELAS
LERENG TANAMAN KELAPA SAWIT (*Elaeis guineensis* Jacq.)
RAKYAT DI KENAGARIAN LADANG PANJANG
KECAMATAN TIGO NAGARI KABUPATEN PASAMAN**

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Abstrak

Distribusi pori tanah mempengaruhi ketersediaan air dan udara dalam tanah bagi pertumbuhan tanaman. Distribusi pori tanah dipengaruhi oleh tekstur tanah, bahan organik dan kemiringan lereng. Penelitian ini bertujuan untuk mengkaji distribusi pori tanah pada beberapa kelas lereng tanaman kelapa sawit rakyat di Nagari Ladang Panjang, Kecamatan Tigo Nagari, Kabupaten Pasaman. Penelitian ini menggunakan metode survei dan pengambilan sampel tanah secara *purposive sampling* berdasarkan kemiringan lereng (0 – 8%, 8 – 15% dan 15 – 25%) dengan 2 kedalaman (0 – 30 cm dan 30 – 60 cm). Parameter yang dianalisis, antara lain pF, berat volume, total ruang pori, permeabilitas, C-organik, tekstur dan stabilitas agregat. Hasil penelitian menunjukkan lokasi penelitian memiliki ordo tanah Inceptisol. Tekstur lempung liat berpasir (0 – 8%); lempung berdebu dan lempung liat berdebu (8 – 15%); serta liat (15 – 25%). Kandungan bahan organik tergolong rendah (8 – 15%) sampai sangat rendah (0 – 8%). Berat volume dan total ruang pori tergolong sedang. Permeabilitas tergolong sangat cepat (0 – 8%) sampai agak lambat (15 – 25%). Stabilitas agregat tergolong agak mantap (8 – 15%) sampai tidak mantap (0 – 8%). Retensi air pada pF 1,0; 2,0; 2,54; dan 4,2 cenderung meningkat seiring dengan peningkatan kemiringan lereng. Persentase pori drainase cepat tergolong tinggi (0 – 8%) sampai rendah (8 – 15 %), pori drainase lambat tergolong rendah (15 – 25%) sampai sangat rendah (0 – 8%) dan pori air tersedia tergolong sangat tinggi (15 – 25 %) sampai tinggi (0 – 8%). Dapat disimpulkan bahwa persentase pori drainase cepat menurun, sedangkan pori drainase lambat dan pori air tersedia meningkat pada setiap peningkatan kemiringan lereng di kebun kelapa sawit.

Kata kunci: *Distribusi Pori Tanah, Kelapa Sawit, Kelas Lereng, Kelas Lereng, Sifat Fisika Tanah*

**SOIL PORE DISTRIBUTION AT DIFFERENT SLOPE
CLASSES UNDER OIL PALM (*Elaeis guineensis* Jacq.)
PLANTATION OF LOCAL SOCIETY IN LADANG PANJANG,
TIGO NAGARI SUB-DISTRICT, PASAMAN REGENCY**

Abstract

The distribution of soil pores affects the availability of water and air in the soil for plant growth. Soil pore distribution is influenced by soil texture, organic matter and slope levels. This study was aimed to examine the distribution of soil pores on several classes of smallholder oil palm plantations in Nagari Ladang Panjang, Tigo Nagari Sub-District, Pasaman Regency. This study used a survey method and soil sampling was conducted by purposive sampling based on slope (0 – 8%, 8 – 15% and 15 – 25%) levels at 2 depths (0 – 30 cm and 30 – 60 cm). Parameters analyzed included soil pF, bulk density, total soil pore, permeability, organic carbon, texture and aggregate stability. The results showed that the soil order in the research location is Inceptisol. The soil texture were sandy clay loam (0 – 8%); silt loam and silty clay loam (at 8 – 15% slope); and clay (at 15 – 25% slope). The organic material content was classified as low (at 8 – 15% slope) to very low (at 0 – 8% slope). The bulk density and total soil pore were moderate. Permeability was classified as very fast (at 0 – 8% slope) to slightly slow (at 15 – 25% slope). Aggregate stability was classified into unstable (at 0 – 8% slope) to rather stable (at 8 – 15% slope). Water retention at pF 1,0; 2,0; 2,54; and 4,2 tended to increase as the slope level increased. The percentage of fast drainage pore was classified into high (at 0 – 8% slope) to low (at 8 – 15% slope), slow drainage pore was classified into low (at 15 – 25% slope) to very low (at 0 – 8% slope) and available water pore was classified into very high (at 15 – 25% slope) to high (at 0 – 8% slope). It could be concluded that the percentage of fast drainage pore decreased, while slow drainage pore and available water pore increased by increasing slope level in oil palm plantations.

Keywords: *Oil Palm, Slope Class, Soil Physical Properties, Soil*