

**KAJIAN SIFAT FISIKA TANAH PADA LAHAN SAWIT  
(*Elaeis guineensis*) BERDASARKAN TINGKAT KELERENGAN  
YANG BERBEDA DI KELURAHAN TANAH GARAM  
KECAMATAN LUBUK SIKARAH KOTA SOLOK**

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## **Abstrak**

Persentase kelas lereng pada suatu lahan berdampak pada perubahan sifat fisika tanah. Tujuan dari penelitian ini adalah menganalisis dan mengkaji sifat fisika tanah pada lahan sawit dengan beberapa tingkat kelerengan yang berbeda di Kelurahan Tanah Garam, Kecamatan Lubuk Sikarah, Kota Solok. Metode yang digunakan pada penelitian ini survei, secara *purposive sampling* berdasarkan kelas lereng pada lahan sawit pada daerah penelitian. Sampel tanah diambil pada lereng 0-8% (Datar), 8-15% (Landai), 15-25% (Agak curam) dan lahan hutan sekunder pada kedalaman 0-30 cm dan 30-60 cm. Hasil penelitian menunjukkan bahwa karakteristik sifat fisika tanah lahan sawit berbeda pada setiap kelas lereng dengan tekstur dominan liat hingga liat berdebu. Bahan organik tergolong rendah hingga sedang 3,77% - 5,36%, berat volume tanah sedang hingga tinggi 1,09 g/cm<sup>3</sup> - 1,17 g/cm<sup>3</sup>, total ruang pori rendah hingga sedang 53,99% - 57,65%. Permeabilitas tanah tergolong agak lambat, sedang, dan agak cepat 1,46 cm/jam - 6,20 cm/jam, indeks stabilitas agregat kurang mantap, agak mantap, mantap, dan sangat mantap 44,08% - 66,04%. Berdasarkan penelitian yang telah dilaksanakan di Kelurahan Tanah Garam, Kecamatan Lubuk Sikarah, Kota Solok disarankan agar petani pada lahan sawit dapat meningkatkan sifat fisika tanah dengan cara meningkatkan kandungan bahan organik tanah, serta menerapkan teknik konservasi.

*Kata kunci : Sifat Fisika Tanah, Kelas Lereng, Lahan sawit*

# ASSESSMENT OF SOIL PHYSICAL PROPERTIES IN OIL PALM (*Elaeis guineensis*) BASED ON DIFFERENT SLOPES IN TANAH GARAM, LUBUK SIKARAH DISTRICT, SOLOK CITY

## Abstract

Percentage of land slope affects the soil physical properties. This research was aimed to analyze and examine soil physical properties in oil palm land at 3 levels of slope in Tanah Garam, Lubuk Sikarah district, Solok city. The method used in this research was a survey method. The soil samples were taken purposively based on class of slope in the research area. Soil samples were taken at slope 0-8% (flat), 8-15% (mild), 15-25% (slightly steep), and secondary forest land at the depths 0-30 cm and 30-60 cm. The result showed the soil physical properties in the oil palm land was different for each class of the slope with the texture ranged from clay to silt clay. The organic matter was categorized into low to moderate (3.77% - 5.36%), the soil bulk density was low to moderate ( $1.09 \text{ g/cm}^3 - 1.17 \text{ g/cm}^3$ ), the total pore space was low to moderat (53.99% - 57.65%). Then soil permeability was classified as rather slow, medium, and rather fast (1.46 cm/jam – 6.20 cm/jam), soil aggregate stability was less stable, rather stable, stable, and extremely stable (44.08% - 66. 04%). Based on the data resulted, it was suggested that the farmers in the oil palm land improve the soil physical properties by increasing soil organic matter content and applying conservation technique.

*Keywords: soil physical properties, class of slope, oil palm land*

