

**KAJIAN SIFAT FISIKA INCEPTISOL PADA BEBERAPA
KELAS LERENG TANAMAN KELAPA SAWIT
(*Elaeis guineensis* Jacq.) DI NAGARI BAWAN
KECAMATAN AMPEK NAGARI**

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Abstrak

Kelapa sawit (*Elaeis guineensis* Jacq.) merupakan salah satu tanaman yang cukup luas diusahakan petani pada berbagai kelas lereng di Nagari Bawan Kecamatan Ampek Nagari, Kabupaten Agam. Penelitian ini bertujuan untuk mengkaji sifat fisika tanah pada beberapa kelas lereng lahan tanaman kelapa sawit di Nagari Bawan, Kecamatan Ampek Nagari, Kabupaten Agam. Penelitian ini menggunakan metode survei dengan pengambilan sampel tanah dilakukan secara *purposive sampling* berdasarkan kelas lereng (0-8%, 8-15%, dan 15-25%) pada kedalaman 0-30 cm dan 30-60 cm. Parameter yang dianalisis yaitu tekstur, bahan organik, berat volume, total ruang pori, permeabilitas, dan indeks stabilitas agregat tanah. Hasil penelitian menunjukkan bahwa daerah penelitian memiliki kelas tekstur tanah tergolong lempung. Kandungan bahan organik tanah tergolong sangat rendah hingga sedang (1.81-5.48%), berat volume tanah tergolong sedang ($0.93 - 1.15 \text{ g/cm}^3$), total ruang pori tanah tergolong sedang (64.90 – 56.48%), permeabilitas tanah tergolong sedang (2.85 – 6.30 cm/jam), dan indeks stabilitas agregat tanah tergolong kurang mantap hingga mantap (42.90 – 67.14%). Berdasarkan hasil tersebut dapat disimpulkan bahwa terjadi penurunan sifat fisika tanah dengan adanya peningkatan kelas lereng, sehingga disarankan kepada pengelola tanaman kelapa sawit untuk meningkatkan sifat fisika tanah lahan kelapa sawit pada kelas lereng 8-15% dan 15-25% seperti melakukan penanaman *legume cover crop* serta penambahan pupuk organik pada masa pengolahan tanah.

Kata kunci: Kelapa sawit, Kelas lereng, Sifat fisika tanah.

SOIL PHYSICAL PROPERTIES DIFFERENT AT SLOPE LEVELS UNDER OIL PALM (*Elaeis guineensis* Jacq.) CULTIVATION IN NAGARI BAWAN AMPEK NAGARI DISTRICT

Abstract

Oil Palm (*Elaeis guineensis* Jacq.) is one of plantation crops continuously planted by people in Nagari Bawan, Ampek Nagari District, Agam Regency. This research was aimed to analyze soil physical properties at three slope levels under oil palm cultivation in Nagari Bawan, Ampek Nagari District, Agam Regency. This research was conducted using survey method on which soil was sampled by purposive sampling based on slope level (0-8%, 8-15%, dan 15-25%) at depths of 0–30 cm and 30–60 cm. Parameters analyzed were soil texture, soil organic matter (SOM), bulk density (BD), total soil pore (TSP), hydraulic conductivity (HC), and aggregate stability (AS). The result showed that soil texture was classified into loam. Soil organic matter was classified as very low to moderate (1.81-5.48%), bulk density as moderate (0.93 - 1.15 g/cm³), total soil pore as moderate (64.90 - 56.48%), hydraulic conductivity as moderate (2.85 - 6.30 cm/hour), and aggregate stability index is classified as less stable to stable (42.90 - 67.14%). It was concluded that the soil physical properties under oil palm cultivation declined by increasing slope level, so it was recommended to improve the physical properties of oil palm land on slope level of 8-15% and 15-25% such as by planting legume cover crops and applying organic matter to the soil during processing period.

Keywords: Oil palm, Slope class, Soil physical properties.