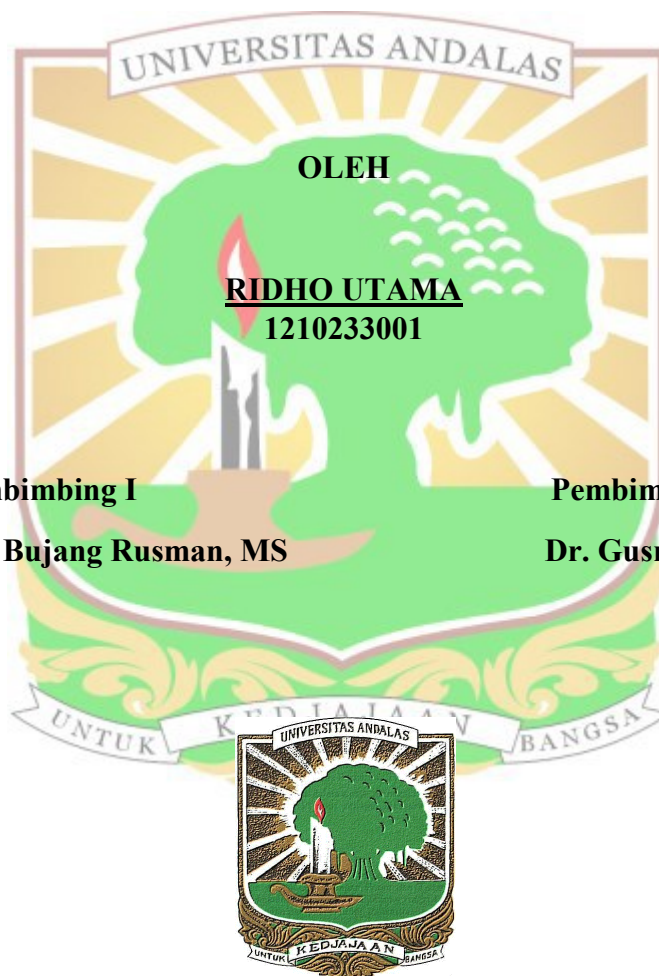


**PENGARUH UMUR TANAMAN KELAPA SAWIT  
(*Elaeis guineensis*) RAKYAT TERHADAP SIFAT FISIKA  
ANDISOL DI KECAMATAN KINALI KABUPATEN  
PASAMAN BARAT**

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# PENGARUH UMUR TANAMAN KELAPA SAWIT (*Elaeis guineensis*) RAKYAT TERHADAP SIFAT FISIKA ANDISOL DI KECAMATAN KINALI KABUPATEN PASAMAN BARAT

## Abstrak

Penelitian ini tentang pengaruh umur tanaman kelapa sawit rakyat terhadap sifat fisika Andisol di Kecamatan Kinali Kabupaten Pasaman Barat di laksanakan pada bulan Mei sampai dengan Agustus 2017. Penelitian ini bertujuan untuk mengkaji pengaruh umur tanaman kelapa sawit rakyat terhadap beberapa sifat fisika Andisol pada umur tanaman (8 tahun, 13 tahun, 18 tahun) dan semak di jadikan pembandingan. Penelitian ini menggunakan metode *Stratified Random Sampling*. Pengambilan contoh tanah dilakukan pada kedalaman 0-20 cm dan 20-40 cm. Parameter yang dianalisis yaitu Tekstur, Struktur, BO, BV, TRP, KA, dan Permeabilitas tanah. BV pada kelaman 0-20 cm (0.85-0.90) g/cm<sup>3</sup>, kedalaman 20-40 cm (0.90-0.92) g/cm<sup>3</sup>, BO pada kedalaman 0-20 cm (4.70-4.74) %, kedalaman 20-40 cm (2.21-5.16) %. TRP pada kedalaman 0-20 cm (60.32-71.84) %, kedalaman 20-40 cm (60.25-71.55) %. Permeabilitas 0-20 cm (1.79-12.70) cm/jam, 20-40 cm (1.76-12.40) cm/jam. Tekstur tanah didominasi kelas lempung berdebu. Struktur tanah pada kedalaman 0-20 cm pada umur (8,13,18 tahun) remah, pada kedalaman 20-40 cm pada umur 8, 13 tahun gumpal bersudut 18 tahun, semak Gumpal. Pengaruh umur tanaman kelapa sawit rakyat terjadi pada umur 18 yang terjadi peningkatan bahan organik dan total ruang pori dibandingkan tanaman kelapa sawit umur 8 dan 13 tahun.

*Kata Kunci: Andisol, fisika tanah, kelapa sawit, tingkatan umur.*



# EFFECT OF OIL PALM (*Elaeis guineensis*) AGE ON THE PHYSICAL PROPERTIES OF ANDISOL IN KINALI DISTRICT PASAMAN BARAT REGENCY

## Abstract

A research on effect of oil palm age to physical properties of Andisol in District of Kinali Pasaman Barat Regency was conducted from May until August 2017. This research was aimed to study the effect of oil palm on some physical properties of Andisol at different plant age (8, 13, and 18 years). Then, soil under bush was also analysed as a comparison. This research used Stratified Random Sampling method. Soil sampling was taken from 0-20 cm and 20-40 cm depth. Parameters analyzed were soil texture, structure, OM, BD, TPS, SWC, and permeability. The result showed that soil BD was 0.85-0.90 g / cm<sup>3</sup> at 0-20 cm, and 0.90-0.92 g / cm<sup>3</sup> at 20-40 cm depth. Soil OM content was 4.70-4.74 % at 0-20 cm depth, 2.21-5.16 % at 20-40 cm depth. Total pore space was 60.32-71.84 % at 0-20 cm depth, 60.25-71.55 % at 20-40 cm depth. Soil permeability rate was 1.79-12.70 cm/h at 0-20 cm, 1.76-12.40 cm/h at 20-40 cm depth. Soil texture was dominated by silty clay loam. Type of soil structure was crumbs at 0-20 cm depth under 8, 13, and 18 years, angular blocky at 20-40 cm depth at the 8, 13, 18 years old crops, land blocky under bushes. The soil under 18 years old palm plantation had higher organic matter content and the total pore space, compared to oil palm crops under 8 and 13 years old.

*Keywords: Andisol, levels of age, oil palm, soil physical properties.*