

**KARBON ORGANIK TANAH PADA LAHAN KELAPA SAWIT
(*Elaeis guineensis* Jacq.) DI NAGARI BAWAN KECAMATAN
AMPEK NAGARI KABUPATEN AGAM**

SKRIPSI

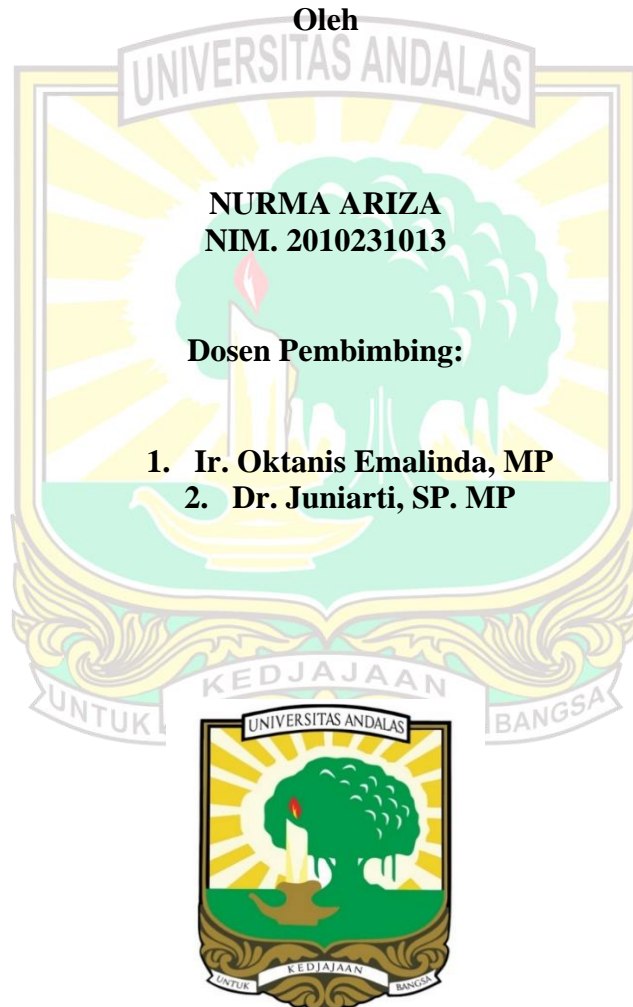
Oleh

UNIVERSITAS ANDALAS

**NURMA ARIZA
NIM. 2010231013**

Dosen Pembimbing:

- 1. Ir. Oktanis Emalinda, MP**
- 2. Dr. Juniarti, SP. MP**



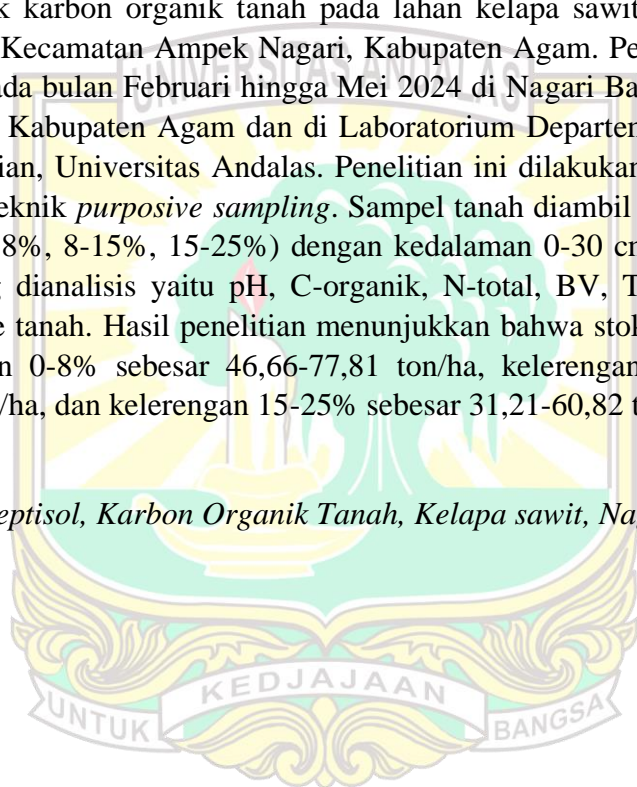
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Abstrak

Nagari Bawan merupakan salah satu Nagari penghasil kelapa sawit di Kecamatan Ampek Nagari. Karbon organik tanah mencerminkan kandungan bahan organik tanah sebagai tolak ukur kesuburan tanah yang dapat mempengaruhi pertumbuhan tanaman kelapa sawit. Penelitian ini bertujuan untuk mengetahui, menghitung, dan memetakan stok karbon organik tanah pada lahan kelapa sawit milik rakyat di Nagari Bawan, Kecamatan Ampek Nagari, Kabupaten Agam. Penelitian ini telah dilaksanakan pada bulan Februari hingga Mei 2024 di Nagari Bawan, Kecamatan Ampek Nagari, Kabupaten Agam dan di Laboratorium Departemen Ilmu Tanah, Fakultas Pertanian, Universitas Andalas. Penelitian ini dilakukan dengan metode survei dengan teknik *purposive sampling*. Sampel tanah diambil berdasarkan tiga kelas lereng (0-8%, 8-15%, 15-25%) dengan kedalaman 0-30 cm dan 30-60 cm. Parameter yang dianalisis yaitu pH, C-organik, N-total, BV, TRP, C-biomassa mikroorganisme tanah. Hasil penelitian menunjukkan bahwa stok karbon organik pada kelerengan 0-8% sebesar 46,66-77,81 ton/ha, kelerengan 8-15% sebesar 38,92-77,81 ton/ha, dan kelerengan 15-25% sebesar 31,21-60,82 ton/ha.

Kata kunci: *Inceptisol, Karbon Organik Tanah, Kelapa sawit, Nagari Bawan.*



SOIL ORGANIC CARBON IN OIL PALM (*Elaeis Guineensis* Jacq.) PLANTATIONS IN NAGARI BAWAN, AMPEK NAGARI DISTRICT, AGAM REGENCY

Abstract

Nagari Bawan is one of the major palm oil-producing areas in Ampek Nagari District. Soil organic carbon reflects the organic matter content in the soil and serves as a key indicator of soil fertility, which can significantly impact the growth of oil palm plants. This research was aimed to assess, calculate, and map the soil organic carbon stocks in smallholder oil palm plantation in Nagari Bawan, Ampek Nagari District, Agam Regency. The study was conducted from February to May 2024 in Nagari Bawan, Ampek Nagari District, Agam Regency, and in the Soil Science Laboratory at the Faculty of Agriculture, Andalas University. The research employed a survey method using purposive sampling techniques. Soil samples were taken based on three slope classes (0-8%, 8-15%, 15-25%) at depths of 0-30 cm and 30-60 cm. The parameters analyzed were pH, organic carbon (C), total nitrogen (N), bulk density (BD), total pore space (TPS), and biomass-C. The results showed that the highest organic carbon stock (46.66 to 77.81 tons/ha) was found at slope of 0-8%, then followed slope 8-15% (38.92 to 77.81 tons/ha) and the lowest (31.21 to 60.82 tons/ha) was at slope of 15-25%.

Keywords: *Inceptisols, Nagari Bawan, , Oil palm, Soil Organic Carbon.*

