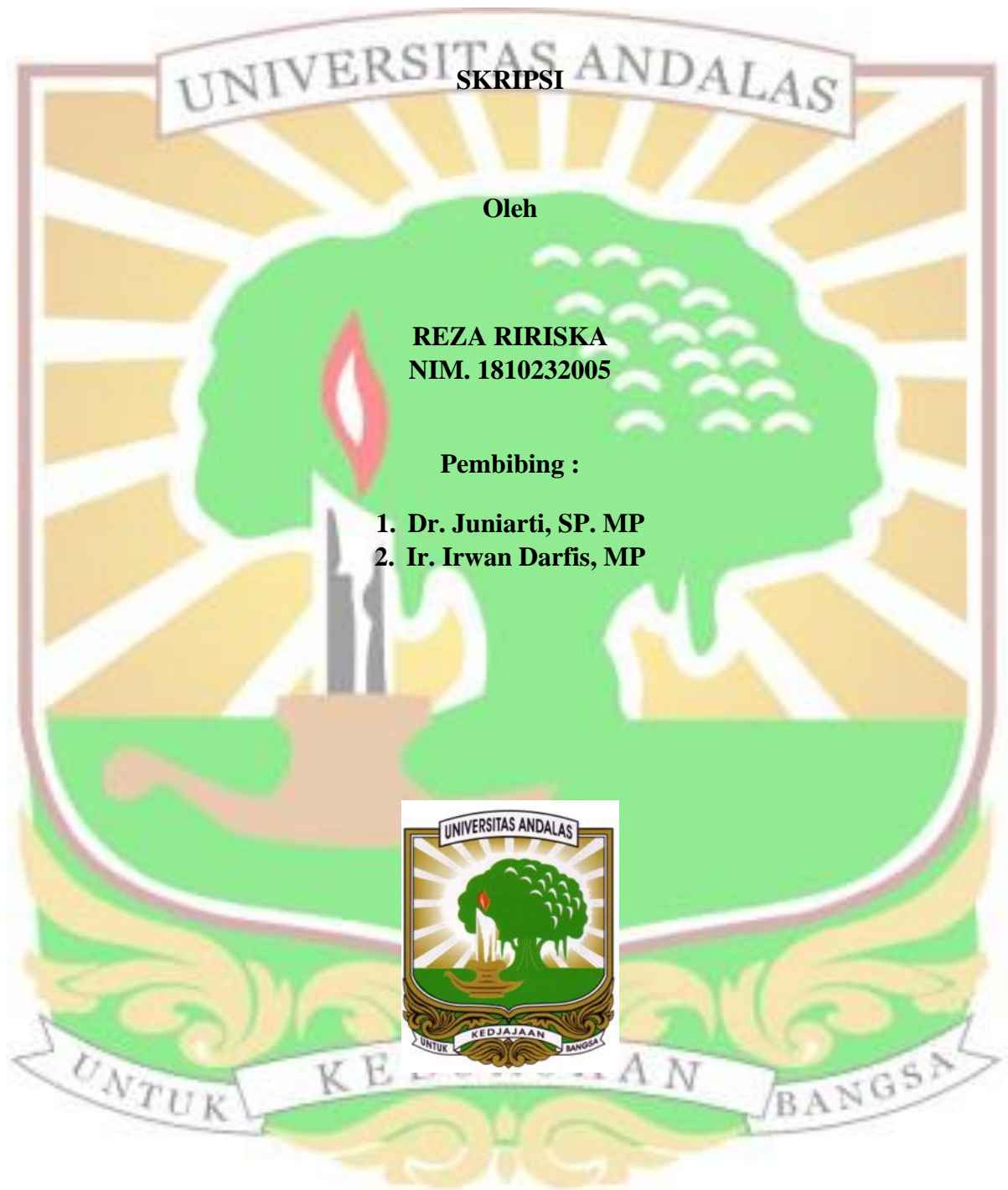


**KAJIAN BEBERAPA SIFAT FISIKA DAN KIMIA TANAH PADA
LAHAN TANAMAN AREN (*Arenga pinnata Merr*) BERDASARKAN
KELERENGAN DI NAGARI GADUT KECAMATAN TILATANG
KAMANG KABUPATEN AGAM**



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**FAKULTAS PERTANIAN
UNIVERSITAS ANDALAS
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KAJIAN BEBERAPA SIFAT FISIKA DAN KIMIA TANAH PADA LAHAN TANAMAN AREN (*Arenga pinnata Merr*) BERDASARKAN KELERENGAN DI NAGARI GADUT KECAMATAN TILATANG KAMANG KABUPATEN AGAM

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ABSTRAK

Daerah Tilatang Kamang merupakan salah satu daerah di Sumatera Barat yang ditumbuhi tanaman Aren. Tanaman Aren dapat tumbuh pada berbagai kelerengan sehingga diperlukan penelitian mengenai sifat fisika dan kimia tanah. Penelitian ini bertujuan untuk mengkaji beberapa sifat fisika dan kimia tanah pada lahan tanaman Aren (*Arenga pinnata Merr*) berdasarkan kelerengan di Nagari Gadut, Kecamatan Tilatang Kamang, Kabupaten Agam. Penelitian ini telah dilaksanakan pada bulan April-September 2022. Analisis tanah dilakukan di Laboratorium Departemen Ilmu Tanah Tanah dan Sumber Daya Lahan Fakultas Pertanian, Universitas Andalas Padang. Penelitian ini dilakukan menggunakan metode survei. Sampel tanah diambil dengan teknik *Purposive Random Sampling*. Sampel tanah yang diambil adalah sampel tanah utuh dan sampel tanah terganggu yang diambil pada 4 kelerengan (0-8%, 8-15%, 15-25%, dan 25-45%) dengan 3 ulangan. Parameter yang dianalisis diantaranya tekstur tanah, berat volume, total ruang pori, C-organik, pH, P-Tersedia, kapasitas tukar kation dan kejenuhan basa. Hasil penelitian menunjukkan lahan Aren memiliki kelas tekstur liat dan lempung berdebu, berat volume berkisar 0,97-1,19 g/cm³, total ruang pori berkisar 53,58-62,05%, C-organik berkisar 2,35-3,22%, pH tanah berkisar 4,50-6,16, P-Tersedia berkisar 5,1-8,98 ppm, kapasitas tukar kation berkisar 20,04-24,11 me/100g dan kejenuhan basa berkisar 44,76-58,52%. Hasil analisis menunjukkan keempat kelas lereng memiliki karakteristik tanah yang berbeda, sehingga mempengaruhi sifat fisika dan kimia tanah pada lahan Aren. Hal ini dapat dilihat terjadi penurunan sifat tanah dengan bertambahnya kelerengan terutama berat volume dan C-Organik.

Kata Kunci : Aren, Fisika dan Kimia Tanah, Inceptisols

UNTUK KEDJAJAAN BANGSA

STUDY OF SEVERAL PHYSICAL AND CHEMICAL PROPERTIES OF SOIL ON PALM (*Arenga pinnata Merr*) PLANT LAND BASED ON SLOPE IN NAGARI GADUT, TILATANG KAMANG DISTRICT, AGAM REGENCY



ABSTRACT

The Tilatang Kamang area is one of the areas in West Sumatra that is naturally grown by palm plants. The plants can grow on various slopes. Therefore, the soil physical and chemical properties were needed to evaluate. This study was aimed to examine several physical and chemical properties of the soil on palm (*Arenga pinnata Merr*) plant land based on slopes in Nagari Gadut, Tilatang Kamang District, Agam Regency. This research was conducted using survey method from April-September 2022. Soil samples were taken using *Purposive Sampling* based on slope levels (0-8%, 8-15%, 15-25%, and 25-45%) with 3 replicates. Soil samples were analyzed in the Laboratory of the Department of Soil Science and Land Resources, Faculty of Agriculture, Andalas Padang University. Parameters analyzed were soil texture, soil bulk density, total soil pore, organic-C, soil pH, P-available, cation exchange capacity, base saturation. The results showed that the soil texture under plam plant was clay and silty clay texture, soil bulk density (BD) was 0.97-1.19 g/cm³, total soil pore was 53.58-62.05%, organic-C was 2.35-3.22%, soil pH ranged between 4.50-6.16, P-available was 5.1-8.98 ppm, cation exchange capacity was 20.04-24.11 cmol/kg, base saturation was 44.76-58.52%. The soil physical and chemical characteristics decreased especially the soil bulk density (BD) and the organic-C by increasing the slope level from 0-8% to 25-45%.

Keyword: Inceptisols, Palm plants, Soil chemical properties, Soil physical properties

