

**KANDUNGAN BAHAN ORGANIK PARTIKULAT PADA
PERTANAMAN AREN (*Arenga pinnata Merr*) BERDASARKAN
KEMIRINGAN LAHAN DI NAGARI GADUT KECAMATAN
TILATANG KAMANG KABUPATEN AGAM**

SKRIPSI

OLEH:



KHAIRAH AGUSTIA

1810233004

Pembimbing

Dr. Juniarti SP, MP

Dr. Mimien Harianti SP, MP.

**PROGRAM STUDI ILMU TANAH
DEPARTEMEN ILMU TANAH DAN SUMBERDAYA LAHAN
FAKULTAS PERTANIAN
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KANDUNGAN BAHAN ORGANIK PARTIKULAT PADA PERTANAMAN AREN (*Arenga pinnata Merr*) BERDASARKAN KEMIRINGAN LAHAN DI NAGARI GADUT KECAMATAN TILATANG KAMANG KABUPATEN AGAM

ABSTRAK

Tanaman Aren merupakan salah satu tanaman yang dapat tumbuh di lahan miring dan menjadi tanaman alternatif dalam pertanian di Indonesia khususnya Sumatera Barat. Penelitian tentang kandungan bahan organik partikulat (BOP) pada pertanaman Aren (*Arenga pinnata Merr*) bertujuan untuk mengetahui dan mempelajari kandungan bahan organik partikulat (BOP) berdasarkan perbedaan kemiringan lahan di Nagari Gadut Kecamatan Tilatang Kamang Kabupaten Agam. Penelitian ini dilakukan dari bulan Januari sampai Agustus 2022. Sampel Tanah diambil di pertanaman aren Nagari Gadut dan dianalisis di Laboratorium Fisika dan Kimia Tanah Fakultas Pertanian Universitas Andalas Padang. Penelitian ini dilakukan dengan menggunakan metode survei dan sampel tanah diambil secara *Purposive Random Sampling*. Sampel tanah diambil pada empat kelas lereng (0-8%; 8-15%; 15-25%; dan 25-45%) pada pertanaman aren di satuan lahan kebun campur dengan tanah berordo Inceptisol. Parameter sifat fisika dan kimia tanah diantaranya tekstur, C – organik, bahan organik partikulat, berat volume (BV), total ruang pori (TRP), stabilitas agregat tanah, dan N-total. Sampel tanah diambil dengan kedalaman 0 – 30 cm dan 30 – 60 cm. Hasil penelitian menunjukkan bahwa bahan organik partikulat (BOP) pada pertanaman aren di Nagari Gadut memiliki kriteria rendah hingga sedang dengan nilai 3,76 – 4,5 % di kedalaman 0 – 30 cm dan pada kedalaman 30 – 60 cm memiliki nilai 3,11 – 3,94 %. Untuk kandungan bahan organik tanah (BOT) termasuk dalam kategori sedang. Sifat fisika tanah pada pertanaman aren di setiap kelas lereng memiliki tekstur liat dan lempung berdebu, bobot volume sedang hingga tinggi, total ruang pori rendah hingga sedang dan stabilitas agregat tidak mantap hingga agak mantap.

Kata Kunci: Aren (Arenga pinnata Merr), Bahan organik partikulat, Inceptisols, Kemiringan lahan

PARTICULATE ORGANIC MATTER CONTENT OF SOIL UNDER AREN (*Arenga pinnata Merr*) PLANTATION BASED ON THE TOPOSEQUENCE IN NAGARI GADUT, TILATANG KAMANG DISTRICT, AGAM REGENCY

ABSTRACT

Sugar palm can grow well on sloping land and as an alternative agriculture in Indonesia, especially in West Sumatra. A research on determination of particulate organic matter (POM) under Aren (*Arenga pinnata Merr*) plantation was aimed to determine and study the content of particulate organic matter (POM) based on land slope levels in Nagari Gadut, Tilatang Kamang District, Agam Regency. This research was conducted from January to August 2022. Soil samples were taken at the Nagari Gadut sugar palm plantation and analyzed at the Laboratory of Soil Physics and Chemistry, Faculty of Agriculture, Andalas University, Padang. This research was conducted using a survey method and soil samples were taken by purposive sampling based on slope classes (0-8%; 8-15%; 15-25%; and 25-45%) in mixed garden with soil order Inceptisol. Parameters of soil physical and chemical properties analyzed were soil texture, organic-C, particulate organic matter, bulk density (BD), total soil pore, soil aggregate stability, and total-N. Soil samples were taken at a depth of 0 – 30 cm and 30 – 60 cm. The results showed that particulate organic matter (POM) in sugar palm plantations in Nagari Gadut had low to moderate criteria (3.76 – 4.5% at a depth of 0 – 30 cm) and a depth of 30 – 60 cm had a value of 3.11 – 3.94 %. The soil organic matter (SOM) content is in the medium criteria. The physical properties of the soil in sugar palm plantation in each slope class had clay and silty loam textures, medium to high bulk density, low to moderate total soil pore, and unstable to moderate aggregate stability.

Keywords: Aren (Arenga pinnata Merr), Inceptisol, Land slope, Particulate organic matter