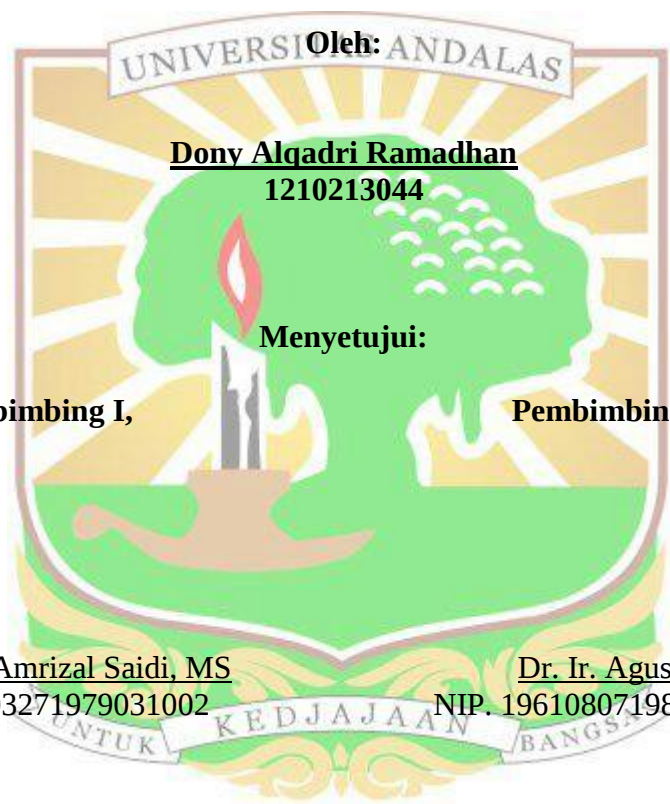


**KAJIAN SIFAT FISIKA DAN ERODIBILITAS TANAH DI
LAHAN AGROFORESTRI KARET (*Hevea brasiliensis*) DAN
GAMBIR (*Uncaria gambir*) PADA BERBAGAI POSISI LERENG
DI KENAGARIAN GUNUANG MALINTANG KECAMATAN
PANGKALAN KOTO BARU**

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**KAJIAN SIFAT FISIKA DAN ERODIBILITAS TANAH DI LAHAN
AGROFORESTRI KARET (*Hevea brasiliensis*) DAN GAMBIR (*Uncaria
gambir Roxb*) PADA BERBAGAI POSISI LERENG DI KENAGARIAN
GUNUANG MALINTANG KECAMATAN PANGKALAN KOTO BARU**

ABSTRAK

Penelitian ini bertujuan untuk mengkaji atau mempelajari sifat fisika dan erodibilitas tanah pada lahan agroforestri karet dan gambir pada berbagai posisi lereng (atas, tengah dan bawah) dikanagarian Gunuang Malintang Kecamatan Pangkalan Koto Baru Kabupaten Limapuluh Kota. Penelitian dilaksanakan dengan metoda survai, kemudian dilakukan pengambilan sampel tanah secara *Purporsive Random Sampling*. Kriteria lahan ditetapkan pada kelereng 8-15% dengan posisi lereng atas, tengah, dan bawah. Pada masing-masing posisi lereng diambil sampel sebanyak dua ulangan berdasarkan tiga jenis penggunaan lahan yaitu lahan karet, lahan gambir dan lahan karet+gambir dengan total 18 titik sampel. Pengambilan sampel pada ketiga bentuk penggunaan lahan sesuai dengan jenis tanah pada ordo yang sama yaitu Inceptisol. Nilai indeks erodibilitas tanah terendah pada setiap posisi lereng ditemukan pada lahan karet dengan kriteria sangat rendah dan tertinggi ditemukan pada lahan gambir dengan kriteria rendah. Tekstur tanah pada setiap posisi lereng di lahan karet+gambir didapatkan lempung liat berpasir dan pada lahan gambir lempung liat berpasir, sedangkan pada lahan karet di posisi lereng atas tekstur tanah didapatkan lempung berpasir tetapi pada lereng tengah dan bawah didapatkan lempung liat berpasir. Posisi lereng atas pada lahan karet memiliki peningkatan kandungan bahan organik (6,02%) dan bobot volume tanah ($1,35\text{g/cm}^3$) serta mempercepat nilai permeabilitas tanah (42cm/jam) dan terjadinya penurunan persentase total ruang pori (46,7%) dan kadar air tanah (7,16%). Posisi lereng atas pada lahan gambir memiliki penurunan kandungan bahan organik (3,14%) dan bobot volume tanah ($1,07\text{g/cm}^3$) serta memperlambat laju permeabilitas tanah (10,9cm/jam) dan terjadinya peningkatan persentase total ruang pori tanah (58,83%). Posisi lereng tengah pada lahan karet+gambir memiliki nilai bobot volume tanah ($1,07\text{g/cm}^3$) yang rendah dan memiliki persentase kandungan air tanah (18,88%) yang tinggi.

Kata Kunci : Erodibilitas, Agroforestri, Karet, Gambir

**STUDY ON SOIL PHYSICAL PROPERTIES AND ERODIBILITY IN
RUBBER (*Hevea brasiliensis*) AND GAMBIER (*Uncaria gambir* Roxb)
AGROFORESTRY UNDER SOME SLOPE POSITION IN KENAGARIAN
GUNUANG MALINTANG KECAMATAN PANGKALAN KOTO BARU**

Abstract

This study was aimed to analyze soil physical properties and the erodibility at 3 slope positions (upper, middle, lower) under 3 types of land use (rubber, gambier, and mix between of rubber and gambier) in Kenagarian Gunuang Malintang Kecamatan Pangkalan Koto Baru. This study used survey method and soil samples were taken randomly at each position (purposive random sampling) in the same soil order, Inceptisol. Soil samples were taken at each slope position from an 8 – 15% sloping area with two replications. Soil erodibility index was determined by using Wiscmeier & Smith method. The highest erodibility index (0.13) was found at the upper slope under gambier land use and the lowest (0.02) was found in rubber land. At the middle slope, the highest erodibility index (0.11) was found in gambier land use and the lowest (0.04) was found in rubber land use. While at the lower slope, the highest erodibility index (0.08) was found in rubber+gambier land use and the lowest (0.01) was found in gambier land use. Both were classified into very low criteria. Soil texture at each slope in rubber+gambier land use was sandy clay loam, in gambier land use was sandy loam. At the upper slope position, soil texture under rubber land use was sandy loam while at the other two slopes was sandy clay loam. Soil structure in every land use was fine-coarse granular. Rubber land use at the upper slope position had the highest soil organic matter content (6.02%), bulk density (1.35 g/cm^3), and permeability (42 cm/h) compared to the others. On the other hand the highest porosity was found in gambier land use (58.83%), and water content (16.02%) found in rubber+gambier land use. At the middle slope, rubber+gambier had the highest soil organic matter content (5.71%), porosity (57.61%), water content (18.88%), and permeability (23.3 cm/h) while the highest bulk density (1.23 g/cm^3) in this slope was found in gambier land use. At the lower slope position, gambier land use had the highest soil organic matter content (5.87%) and permeability (39.97 cm/h), while the highest porosity (58.04%) and water content (16,17%) were found in rubber+gambier land use, and the highest bulk density (1.23 g/cm^3) was found in rubber land use.

Key word: erodibility, agroforestry, rubber, gambier, land use